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ABSTRACT

The opening session of the seventh annual seminar of the Documentation Research and Training Center is provided in verbatim form. The section of Group Meetings and Plenary Sessions examines the propositions presented in the thirty-two papers presented in Volume I (LI 002 230). The balance of the report provides: (1) the Valedictory Address and the Vote of Thanks that was given as part of the Concluding Session, (2) the list of office-bearers and groups, (3) the list of delegates, (4) the time table, (5) the Draft Rules of Procedure for Plenary Sessions and Group Meetings and (6) an index. (MF)

ED0 45100

OCT 27 1970

③ **DOCUMENTATION RESEARCH AND TRAINING CENTRE**, Bangalore (India)

(INDIAN STATISTICAL INSTITUTE)

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ANNUAL SEMINAR

7

SUBJECT ANALYSIS FOR DOCUMENT FINDING SYSTEMS
QUANTIFICATION AND LIBRAMETRIC STUDIES
MANAGEMENT OF TRANSLATION SERVICE.

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V 2: PROCEEDINGS AND INDEX

LI 002 231

112 CROSS ROAD 11, MALLESWARAM
BANGALORE 3
ⓒ 1969

DOCUMENTATION RESEARCH AND TRAINING CENTRE (=DRTC)

112 Cross Road 11, Malleswaram, Bangalore 3

1 OBJECTIVES

The Documentation Research and Training Centre, established in 1962 by the Indian Statistical Institute, has the following objectives :

1 To do and to promote continuing research in documentation ;

2 To give a course of training in documentation ; and

3 To do consultant service in documentation.

2 THE COURSE

The course offers comprehensive instruction in the theory and practice of documentation. It places emphasis on imparting theoretical knowledge of a high order and at the same time on equipping the student with the necessary professional competence based on practical experience. Instruction is largely individual. Tutorials, small group discussions, and weekly colloquia are organised so as to develop in the students the capacity for systematic thinking and for clear exposition.

In the observational study period, the trainees are given an opportunity to visit and observe the working of specialist libraries, industrial units, and research laboratories. They are also given practical working knowledge of document finding with mechanical aids such as Punched Cards and Computer. They also receive instruction and experience in the organisation and managerial aspects of reprography and translation work.

21 ANNUAL SEMINAR

The Annual Seminar, turned on some specific area of documentation, forms an integral part of the course.

22 HOSTEL

To make this participative work possible, the DRTC is made a residential institution. Living in the hostel attached to it is obligatory.

3 SUBJECTS OF STUDY

Group 1

1 Universe of subjects : its development and structure ;
2 Depth classification *(Theory)* ;
3 Depth classification *(Practice)* ;
4 Library catalogue.

Group 2

5 Documentation ;
6 Management of specialist library
7 *(i)* Mechanised document finding systems ;
  (ii) Elements of statistical analysis ;
8 A project in documentation.

Group 3

9 A project consisting of the survey of the trend in current research in a specific subject.
10 Observational study.

31 PROJECT 1

The project in documentation, to be completed during the formal course in DRTC, consists of the preparation of a documentation list by each student on a specific subject. The work involves scanning and selecting articles from an approved set of periodicals relevant to the subject, minutely classifying the documents, preparation of abstracts of the documents, and preparation of the necessary added entries.

A Depth Schedule for the classification of the subjects covered by the documentation list is also to be worked out simultaneously for the minute classification of the documents.

Continued on page 3 of the cover

DRTC Annual Seminar, Papers and Proceedings

(1) (1963) Documentation Periodicals: Coverage.Arrangement.Scatter. Seepage.Compilation.

(2) (1964) Document Retrieval: Classification. Subject Heading. Presentation of Information.

*(3) (1965) Depth Classification. Subject Heading.

*(4) (1966) Universe of Knowledge: Its Structure and Development. Developments in the Design of Depth Schedules. Promotion of the Use of Documentation List in Libraries.

(5) (1967) Developments in Classification. Management of Reprography Service. Subject Headings and Feature Headings.

(6) (1968) Theory and Practice of Abstracting. Developments in Classification. Technique of Teaching Documentation.

* Out of Stock

" The Five Laws of Library Science

1 Books are for use.
2 Every reader his book.
3 Every book its reader.
4 Save the time of the reader.
5 A library is a growing organism."

S R Ranganathan

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DRTC Seminar (7)(1969). MA.

WELCOME ADDRESS.

A NEELAMEGHAN, Convener, DRTC Seminar.

Dr Ghatage, Dr Ranganathan, Delegates to the Seminar, and Ladies and Gentlemen,

At the outset, let me extend to you all a warm welcome to the DRTC and to this inaugural function of the Seventh All-India Seminar on Documentation. This I do on behalf of the Staff, Research Scholars, and Students of DRTC, the Indian Statistical Institute, which is the parent body of this Centre, and Dr Ranganathan, Director of the Seminar, who is not able to be present here to greet you personally due to indifferent health.

We are particularly happy that Dr Ghatage is inaugurating the Seminar. It is gracious of you, Sir, to have acceded to our request. It is also a measure of the importance you place on library and information service. As one who has been a teacher, design and production engineer, and a manager of a large industrial undertaking, for several years in each of these capacities, Dr Ghatage can tell us with authority the information needs of teachers, research workers, production engineers, and managers. And his advice will be heeded with respect. Dr Ghatage had his higher education at the Kaiser-Wilhelm Institute, Gottingen, submitting his thesis in the field of Aerodynamics in 1936. After serving as Professor of Aeronautical Engineering in the Indian Institute of Science from 1942 to 1947, Dr Ghatage joined the Hindustan Aeronautics Ltd as Chief Design Engineer, to become the General Manager of the company in 1967. Among his achievements as a Design Engineer are a Troop Carrying Glider (1941-42), HT-2 Trainer Aircraft, HJT-16, the first Jet Trainer for the IAF designed in this country and the HJE-2500 Turbo-jet Engine. Dr Ghatage is a Fellow of the Indian Academy of Sciences, the Aeronautical Society of India, Royal Aeronautical Society, and a member of the Institute of Aeronautical Sciences, USA. For his significant contributions to the field of production engineering, he was awarded, in 1969, the Walter Puckey Prize by the Institution of Production Engineers. Dr Ghatage has contributed several research articles and reports in his field of specialisation. He has toured widely in Europe, USA, and Australia. Ladies and Gentlemen, you will agree with me that here we have an outstanding personality to inaugurate the DRTC Seminar.

To all the delegates and observers attending the Seminar I extend a hearty welcome. As you are all aware, the annual seminar is designed to provide for an exchange of ideas on technical problems among the documentalists and between the practising documentalists and the research workers at this Centre. The provisional list of 100 delegates indicate that we have representatives from all over India -- 17.6 percent representing Industry and Business Organisations, 42.7 percent representing Academic Institutions, 39.7 percent representing Research Institutions. Those, who had indicated their intention of participating in the Seminar early, would have received a copy of the volume of papers and the propositions to be discussed at the Seminar three weeks ago. The others would have got them by now at least. I trust that you will have fruitful discussions in all the sessions and those who are coming from outside Bangalore, will, I hope, also have a reasonably comfortable stay here.

To the alumni of the DRTC, the annual seminar is an occasion for reunion and meeting with the new batch of students. I am extending to you a warm welcome.

Finally, to the distinguished ladies and gentlemen, who have kindly accepted our invitation and added dignity to this function by their gracious presence, I extend a hearty and warm welcome.

DRTC Seminar (7)(1969). MB.

DEMAND OF INDUSTRIES ON THE LIBRARY PROFESSION : DOCUMENTATION.

S R RANGANATHAN, Director of the Seminar.

OPENING ADDRESS.

Dr Ghatage, Professor Neelameghan, Mr Langridge, Colleagues in the Profession, Ladies and Gentlemen:

0 WORK OF THE YEAR

One of the usual parts of the Opening Address of the Director of a Seminar or the President of a Conference is a rapid survey of the work done during the year in the subject-field. But this task has been made unnecessary by Professor A Neelameghan and Messrs Ganesh Bhattacharyya and M A Gopinath, by their giving a report of the DRTC Research Cell of 1969. These papers will be found at the end of the volume of papers. They cover classification research, cataloguing research, and Librametry. I therefore, skip this part of my address, avoid technicalities, and begin with the general part of my address.

1 EMERGENCE OF DOCUMENTATION

The theme of my opening address this year is "Demand of Industries on the Library Profession : Documentation". To realise why the library profession took up Documentation as a new function on itself, why this has been done in earnestness only after World War II, and what it is all about, we should look into the past along two lines and also look around to see what is happening today.

With regard to the past, we shall confine ourselves only to the post-printing era. One line of approach will be the nature of the users of library service. Another will be the nature and the rate of production of printed documents for use. With regard to what is happening today, we should consider the heavy impact of the population pressure and the consequent social pressure on library service.

2 CHANGE IN THE NATURE OF THE USERS OF LIBRARY SERVICE

Till about half a century ago, literacy was very low in every country. The number of scholars seeking the use of libraries was lower still. Therefore, a library was generally managed by a scholar in some subject, assisted by clerical labour. This was so in most of the university and college libraries. No library profession could emerge in these circumstances. In fact, it did not emerge. About the middle of the nineteenth century, elementary education was made compulsory in some of the countries. To prevent relapse to illiteracy, a public libraries system was also slowly developed as an ausiliary. The readers were mostly non-scholars, who had completed just the elementary school course. Naturally, their demand was largely for books of entertainment -- such as, fiction and travel. Therefore, the librarians appointed for public libraries were largely non-university men. They pursued their work more as a craft than as a profession. Of course, there were a few exceptions. Melvil Dewey, James Duff Brown, and W C Berwick Sayers are outstanding examples of this kind. The practice of having a full-timed librarian instead of putting a scholar in part-time charge was taken up by academic libraries too. This led to abler men taking up library work. In its turn, this gradually led to the emergence of a library profession. This factor paved the way to meet the new social demands on library service today.

3 CHANGE IN THE NATURE OF DOCUMENTS FOR USE

Till the present century, the number of books published was relatively small. The rate of growth of a library was also small. Therefore, a scholar-reader could easily find his way among the books, and choose what was suitable to him without the help of a librarian. But in the present century, this condition changed. New books are produced each year in great numbers. And also books are added to a library in great numbers. A library collection soon went beyond the capacity of self-help even in the case of a scholar-reader. It was particularly so in the case of a generalist reader using public library service. Therefore, the need for personal help to readers by librarians in the choice of books gradually intensified. The need for a classified arrangement of books and a scientifically prepared catalogue also got intensified. The number of books likely to be of use to a library went beyond its financial capacity. Therefore, the need for basing Book-Selection work on scientific principles slowly got intensified. All these factors led to the emergence of a library profession and of a library science capable of giving guidance to the library profession. As a result of these social factors, library craft changed into library science. The signal for this was the formulation of the fundamental laws of this science about 40 years ago. This happened in India. The fundamental laws were published under the title Five laws of library science. These laws are:-

1 Books are for use;
2 Every reader his book;
3 Every book its reader;
4 Save the time of the reader; and
5 Library is a growing organism.

Of these laws, Berwick Sayers wrote in 1957, "A work of great simplicity which conceals depths and yet reveals what may be called the spiritual but intensely practical springs" of the activities of the library profession. This factor paved the way to meet the new social demands on library service today.

4 WASTE DUE TO ABSENCE OF DOCUMENTATION SERVICE

During the last 25 years, industrialisation has led to intensive specialisation. Tiny new subjects emerged here, there, and everywhere from the horizon of the already known universe of subjects. These tiny new subjects would not justify communication through separate books on them. They have to be communicated in the form of articles in periodicals. The rate of output of research -- particularly of team research -- oriented to the needs of industries has exceeded all anticipation. Therefore, the number of periodicals containing them has gone on mounting up. It is now estimated to be approaching the neighbourhood of 100,000. The research workers naturally find it difficult to keep track of them. As a result, a good deal of unintended and unwanted repitition of one and the same piece of research happens to occur. It has taken some years for the industries to discover it. Here is an illustrative account, from the list of case studies compiled recently by Prof Neelameghan, of the loss incurred unknowingly in some industries.

SN	Loss	Field of Research	Country
1	Rs 216,000,000	Science in general	UK
2	Rs 15,000,000	Electronics	USA
3	Rs 18,700,000	Electronic translations equipment	USA

5 PREVENTIVE MEASURE AGAINST LOSS

It is the realisation of such colossal loss that has led the library profession to extend its service to the research forming the basis of specific industries. For this purpose, it is developing profoundly sharper techniques in Classification, Cataloguing, and Reference Service. It is also taking the help of the Translation Profession and of the technicians needed for the Reprography of documents. Here is an illustrative account, from the list of prepared case studies compiled recently by Prof Neelameghan, of the savings made by some industries, as a result of employing documentation lists.

Savings Due to Documentation Service

SN	Saving	Field of Research	Country
1	Rs 1,650,000	Electronic welding equipment	Lithuania

SN	Saving	Field of Research	Country
2	Rs 8,000 per annum	Handicrafts ..	Sweden
3	Rs 100,000	Clothing ..	Denmark
4	Rs 300,000	Machine tool ..	India
5	500 man-hours of research personnel	Research and development laboratory	USA

6 DOCUMENTATION: THE MEANS FOR PREVENTION OF LOSS

61 Atomisation of Commodity Production

The library profession has been looking around to find the lines along which it should modify its service to meet the requirements of industries. What is it that makes a change necessary! It has traced the ultimate cause for the needed change to the trend in modern industries. That trend may be summed up by the term 'Atomisation of Commodity Production'.

Let us begin with a homely example. Let us consider food production. About 70 years ago, when I was a boy, our village had about a hundred families. Each family owned its own fields, itself prepared the necessary manure, grew paddy and pulses, had its own coconut trees, tamarind trees, and kitchen garden. The family itself husked the paddy, cured and split the pulses; and made flour of them. All such ingredients were used in the kitchen of the family and food was cooked. The family had its own cow and buffalo. Milk, butter, and other dairy products were made in the family itself. What is happening today? As an illustration, 1 Some persons specialise in fertilizers;

2 Some specialise in cultivating and harvesting work;

3 Some others specialise in producing insecticides to save the crops;

4 A few in producing better strains of the different varieties of crops;

5 Some others in making flour out of the grains;

6 Some in dairy work; and

7 Some in kitchen gardening.

The family buys all the necessary commodities, and reduces its own kitchen work to a minimum. The trend in the production of any commodity today is somewhat as follows:

1 The Central Factory designs and specifies the different kinds of the ultimate parts of the commodity;

2 It leaves the production of each ultimate part to a small-scale industry of its own;

3 It then collects the ultimate parts from the respective small-scale industry;

4 It tests their quality and their conformity to the prescribed standard and specification; and

5 It assembles them into the final commodity, making slight amendments of the parts, wherever found necessary.

For example, a wrist watch consists of about 120 kinds of parts. While living in Switzerland, I found the production of each such part left to the care of cottage industries in the villages. The main work of the watch maker was the asembling of these parts. I am told that an aircraft requires a few thousands of ultimate parts; and that a motor car, a few hundreds. The production of each part is already left or will soon be left to an auxiliary producer. This is what is meant by Atomisation of Commodity Production.

62 Atomisation of the Subject of Industrial Research

A consequence of the atomisation of commodity production is that the subject of industrial research also gets atomised. A small industry concerned with a particular part builds up a vast experience in respect of that part. This leads it to make continuous improvements in the parts through specialised research. For example, in May 1958, I visited Mangalore, where I had started teaching in 1917. I found one of the students of the first batch, specialising in making springs for transport vehicles -- be it a locomotive engine, or a railway carriage, or a motor truck, or even a horse carriage. He and his son had developed several new techniques in this field. Such a thing could not be even dreamt of in 1917. Least did I then expect that one of my students in the senior Intermediate Class would become a speciaist of such a severe kind. Anyhow it indicates the modern trend in specialisation.

In 1959, I found in the Patel Vidyapith (University) in Gujarat, specialisation in making fences. They were supplying these fences to the different railways and to several other organisations. This Centre wa developing new techniques in the subjects connected with the production of fences.

This is what is meant by Atomisation of the Subject of Industrial Research.

63 Articles on Atomised Research

The results obtained by such atomised research are now published in periodicals. Viewed from the international angle, some fields of atomised research maintain their own periodicals to publish their articles. In the case of others, the articles are scattered in periodicals in one or other of connected subjects. If a specialist, making research in the subject concerning a particular part of a commodity is not fed with the latest ideas having a bearing on his subject-field -- however narrow -- his research time will be wasted. Or, the producer of the commodity concerned will be using outmoded techniques. This will lead to a shrinkage in his market and an ultimate decline in the success of his business. This phenomenon is not peculiar to commodity production alone. It is developing in business management and in the running of Government Departments. About five years ago, the Home Ministry of the Government of India had realised this phenomenon. One of its Deputy Secretaries came to the DRTC along with a librarian of the Ministry, to discuss the ways and means of feeding the Officers with the latest or the nascent ideas appearing in the field of the work of his Ministry. This sensitiveness to the reality of the situation and readiness to cut off from the old ways filled me with a sense of joy and of hope for the future of our Motherland.

7 IMPACT OF ATOMISATION ON LIBRARY TECHNIQUES

The library profession realised the demands on its work of

1 Atomisation of commodity production, and of the processes in the business and governmental management;

2 **Atomisation** in the fields of specialised research;

3 Abundance of specialised articles on nascent ideas on minute subjects, pouring into libraries through periodicals;

4 Inadequacy, for service in specialist libraries, of the older library techniques developed for generalist libraries including the academic libraries of the past;

5 Continuing research in library techniques to organise and to serve specialist readers with articles containing the latest or the nascent ideas in their respective fields of work;

6 Application of the ever-changing new techniques in the preparation of documentation lists and in the facet analysis of readers' queries in the course of the trilogue between the reader, the documentation list, and himself; and

7 Advanced training to enable specialist librarians -- denoted by the term 'Documentalist' -- to give adequate service to specialists in industrial and other research organisations and Government Departments.

8 DRTC AND ITS WORK

81 Foundation of DRTC

A documentalist needs special education, after taking a degree in library science. The statesman-scientist Professor P C Mahalanobis, FRS, anticipated this need even in 1955, when he was a member in the Planning Commission in charge of Perspective Planning. When he came to Zurich in 1956, he met me and urged me to return to India to start research and training in documentation. In 1961, he succeeded in persuading the Indian Statistical Institute to establish the Documentation Research and Training Centre for this purpose. It was finally started in 1962 at Malleswaram, Bangalore.

82 The Course

The course is an arduous one and it extends over 14 months. Each student has to be given not only a general course in documentation, but also a special course suited to the needs of the industry or the research organisation, which deputes him. He has also to be given training in developmental research in documentation. This is necessary because every special subject is now proliferating rapidly; and he will have to meet these proliferations by his own tiny research. Each student of DRTC has therefore to work long hours and meet any of the teachers at any time during the day. This has made residence compulsory in DRTC. Each student has to work out two projects. The first is done during the period of his residence in DRTC. It consists of:

1 Preparing a list of about 500 assorted current articles in the subject-field of his deputing body;

2 Designing, under guidance, a Depth Version of the scheme for classification suited to his subject-field; and

3 Preparing the Documentation List with the aid of the schedule for Depth Classification designed by him.

The second project is done after the completion of his course, while working as documentalist in his own organisation. It consists of the preparation of the Trend Report in the development of his subject-field.

83 Annual Seminar

There is an Annual Seminar on a specified area of documentation. This is usually attended also by the old students of DRTC and by other documentalists. This gives the students -- both present and past -- a rich and rewarding experience.

84 Research in Documentation

The staff of the DRTC has not only to train the students in this intensive way, but also conduct research in documentation. Without this, the teaching will become ineffective. Therefore, the admission has to be restricted to six students per year.

85 Permeation of the Influence of DRTC

According to the Chairman of the Classification Research Group of the International Federation for Documentation (FID/CR), this intensive training in documentation given by DRTC is unique; its work is of value not only for India, but to all the countries of the world. This is a subject in which India is not lagging behind other countries.

9 APPEAL TO INDUSTRY, RESEARCH ORGANISATIONS, AND GOVERNMENT DEPARTMENTS

Each industry, research organisation, and Government Department, should realise that the money spent in selecting a suitable candidate and deputing him to DRTC to be trained as a documentalist is not money thrown away. As illustrated in Sec 4, it eliminates a considerable waste; and as shown in Sec 5, the money invested in the training comes back to the organisation many-fold. This is an appeal to the industrial enterprises, research organisations, and Government Departments of India. The Inauguration of this Seminar on Documentation by a person who has been the Head of one of the biggest industrial enterprises in the country is a good augury.

With all best wishes for useful achievements in the deliberations of this Seminar.

DRTC Seminar (7)(1969).MC.

INAUGURAL ADDRESS.

V M GHATAGE, Member, Board of Directors, Hindustan Aeronautics Limited, Bangalore.

Professor Neelameghan, Ladies and Gentlemen:

1 INTRODUCTION

I was wondering what was the reason for my being invited to inaugurate the Seventh DRTC Annual Seminar. I found the answer to this question a few minutes back, before coming onto the platform. Obviously, there seems to be a feeling that if you are connected with an industry -- and that forms one of the subjects for discussion in the seminar -- something could be done by me in the matter. I am sorry to disappoint you in this, because I have ceased to be connected with the HAL any more. However, I must thank Prof Neelmeghan for introducing me in very flattering words and saying that I should be of some use in expressing the information needs of the industry and what we expect from the library profession.

2 USE OF INFORMATION

Well, in any human activity, one does refer to books, periodicals, and other documents, for information on any subject that one is interested in. This is because one would like to know what others have done before in the subject, and what is being done at the present moment. To get exhaustive information available on a subject, is an impossibility. Because the sources have become too many; and the number of workers in every field of activity is also multiplying rapidly. It has, therefore, become necessary that somebody organises a systematic method by which one gets his information needs satisfied as much as possible in the shortest space of time. But nobody can vouchsafe that everything available in the world on a given subject could be understood or digested before you undertake to do some research or develop some new methods in the industry. Obviously, the better the system designed, the more is the information available.

3 PROLIFERATION OF INFORMATION

But, is it possible for anybody -- even supposing that I choose a particular subject, a small branch of it, and still a specialised one in that field -- to have access to information in full? Let us also suppose that an efficient man, trained in the methods of giving effective information service, is to be approached. He gives me a list of sources of information and I glance through it. Obviously it is in the form of extracts. Even if that list is boiled down further by the man who uses it, by ticking off "may be this is not of interest", my experience has been that, in many cases, you still remain unsatisfied with what is available to you and do not get what you are seeking for. Either the information is of a general nature, or much of it is presented in a different manner. You want some specific information on a job, so that you do not waste your resources in experimentation. You find that the proportion of the information that is of relevance to your requirement to that you cannot use, has such a vast difference, that many a time one wonders whether it is worthwhile doing it. I am certainly not indicating that efforts have not been made to give better service. This may happen because you know that the number of periodicals, and other documents, in many different fields, are growing rapidly.

4 PROBLEM OF SELECTION

In my own field of activity, I happen to glance, every day, through a number of periodicals, in which a sort of a precis of an article of interest, is given. This itself forms a big volume each month. I find that a lot of repetitive work is reported or the work on a project is reported with only minor modifications. The same thing occurs again and again, but with different presentation. One rarely comes across something fundamental and not done before. But what is reported has the potentiality of developing into a new subject altogether, by utilising it for many purposes. And in that fashion, one has to choose -- it is very difficult to say -- what is of importance, leaving out the trash part which forms about 80 per cent of the volume. When we pickout a very small part of the information, after scanning a number of papers, we wonder whether it is worthwhile to do so. The wastage of newsprint is tremendous. The sorted out paper gets multiplied and then it is thrown on the consumer so that he himself has to start another operation to sort out. And this, I think, is the trend of the world today. And we think that the more information one is having, the more he appears learned before you.

5 REAL PURPOSE OF SYSTEMATISATION OF KNOWLEDGE

I would like to put a few thoughts before you about the industry, which have nothing to do with the industry I once represented. Your seminar is going to deal with the subjects such as "Subject Analysis", "Use of Quantification and Librametric Studies, and "Provision of Translation". On these subjects, I would like to say a few words, which are not mine. I have read these ideas in a completely different field. Lately I have slowly developed interest in matters concerning the classification of things in the various subjects. We talk about knowledge which we have acquired by a study of the outside world. But this knowledge, we cannot claim it as our own. A personal, intimate knowledge of a subject is very difficult to get. If we sit down quietly and do a bit of introspection, we reach the limiting point. We begin to wonder whether the knowledge we have acquired is beset with a tremendous amount of limitation. Library science, or for that matter, any human activity, has merely to deal with the outside world or with the knowledge of it. The noble profession of really systematising knowledge, of putting it together in a coherent and understandable way, is a very good and laudable effort. Let us not forget the purpose of this systematisation of knowledge and get caught in the maze of techniques.

6 TRANSLATION

There is another small thought I would like to share with you and that is the difficulty the industrialists face in understanding the scientific documents translated into English from French, German, Russian, etc. It is not sufficient if the translator knows the language of the document he has to translate. He has to know something about the subject also.

Otherwise the user will find it difficult to understand the translated document.

7 CONCLUSION

Ladies and Gentlemen, I do not want to take much of your time. I am thankful to you for giving me an opportunity to put across my ideas to you for consideration. I have now great pleasure in inaugurating this annual seminar, where you are going to put together your heads, discuss things -- I suppose as violently as I would like you to do if you honestly believe me --, and come to some useful conclusions, because the results of your deliberations are going to be used by us, thereby saving time and money as it has been described before.

DRTC Seminar (7)(1969). MD.

VOTE OF THANKS AT THE INAUGURAL FUNCTION.

B S S GUPTA, DRTC, Bangalore 3.

Dr V M Ghatage, Dr S R Ranganathan, and Friends:

I have great pleasure in proposing a hearty vote of thanks to the distinguished speaker of today on behalf of the Documentation Research and Training Centre, the Indian Statistical Institute, the delegates to this Seminar, and all those who have assembled here. Dr V M Ghatage who inaugurated this seminar was gracious enough to have accepted our invitation to inaugurate this seminar in spite of his heavy commitments. In his inaugural address he rightly pointed out the repetitive aspects in information production and this leading to search through disorganised heaps of information to get relevant data. Thus there is a vicious circle between real knowledge, repetitive knowledge, and search for real knowledge, and he said that documentation has a role to play in spotting out the relevant information at the right moment, thus braking the vicious circle in the publishing world.

It is our misfortune that we could not have Dr Ranganathan, Director of the Seminar, to be present here, to deliver the Opening Address, due to indifferent health. However, we are very grateful to him for having taken pains to write out his Opening Address, to be read at this session. He has traced the emergence of documentation, as a consequence of population pressure, social pressure, and economic pressure. He has succinctly pointed out the value of documentation service to industries, its role in the promotion of national economy and emphasised the need for specialised training to man documentation centres in industries. He has also pointed out the role of DRTC towards this aspect.

On behalf of the delegates to this seminar and those who have assembled here, I have great pleasure in proposing a hearty vote of thanks to him.

Finally, I thank all the delegates to the seminar and all the distinguished guests, who have assembled here for the inaugural session.

Thank you.

PARTS N/Q : SUBJECT ANALYSIS FOR DOCUMENT FINDING SYSTEM

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PROPOSITION A1.

1 STATEMENT OF PROPOSITION A1

In the design of document finding system, it is helpful to recognise the specialists view of the patterns of the Universe of Subjects. [Paper AA].

2 PRESENTATION OF PAPER AA

F J Devadason presented the salient points of the work reported in Paper AA. He said:

1 A Document Finding System should be resilient and versatile to accomodate new subjects, different modes of development of subjects, and also the variation in the rate of development of subjects.

2 For this purpose, the librarian in general and the classificationist in particular, should find out the subject specialist's own view about the attributes of the universe of subjects.

3 The subject specialists are both the creators as well as users of the subjects. It is helpful for the librarian in designing a Document Finding System to recognise the view of the subject specialists about the modes of formation of subjects.

4 Paper AA presents the view of Kenneth Boulding, Solco W Tromp, and K Feibleman on the modes of formation of subjects.

According to Boulding the following four modes of formation of subjects can be recognised:

41 Fragmentation.- Division of the universe of subjects into a large number of small chunks each attracting a small group of specialists;

42 Combination.- Combination of any two subjects due to inter-disciplinary approach giving rise to the Hybrid Disciplines; and

43 Integration.- Mode giving rise to unifying disciplines, such as General Systems Theory and Theory of Integrative Levels.

These may be likened to Fission, Lamination, and Fusion respectively as studied by the librarian in the course on the universe of subjects.

Similarly, Tromp's "Border science" comprises those branches of sciences which interconnect the fringes of well established basic sciences, forming a new independent discipline. Examples of Border sciences are Psycho-physics, Physical embryology, Physical Neurology, Geo-ecology, Medical geography, Bio-climatology, and Bio-meteorology. Astronautics, and Supersensorics are examples of "Border science", yet to be established.

These findings may help a librarian in understanding the structure and development of subjects for the purpose of designing efficient document finding systems.

3 ISSUES DISCUSSED IN GROUP MEETINGS

The following issues relating to Proposition A1 were discussed in the group meetings:

31 Comparison with the growth-pattern of a living organism (Weiss).

32 Modes of formation of
  321 Hybrid disciplines (Boulding),
  322 Border sciences (Tromp), and
  323 Integrative disciplines (Boulding, Feibleman, etc).

33 Comparison of modes of formation recognised by subject specialists (mentioned in Category 2 above) with the modes of formation of subjects such as Fission, Lamination, Loose Assemblage, and Fusion.

34 Methods of accommodation of the disciplines that are mentioned above in a scheme for classification.

35 Interpretation of the growth-pattern with modes of formation of subjects.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 The comparison of the growth pattern of a living organism with the growth pattern of knowledge as described by Weiss is a helpful analogy. But the analogy would be more appropriate in relation to the process of thinking of an individual rather than to the pattern of development of the universe of subject as a whole. It may also be taken as an illustration of the pattern of emergence of knowledge through an individual mind.

42 The modes of formation of Boulding's Hybrid Disciplines and Tromp's Border Sciences, are not entirely interconnected ones. There may be some overlapping in this region. However, the idea of integrative disciplines of Boulding, Feibleman, and others point to a similarity of view of the development of the universe of subjects.

43 The concepts of Hybrid Discipline and of Border Science appear to be somewhat similar to the concepts of Fusion, and Partial Comprehension.

Further investigation should be done to find correlation between the modes expressed by Boulding, Tromp, and others and those envisaged in the General Theory of Classification.

44 The proposition confines itself mainly to the study of the development and structure of the universe of subjects. The method of incorporating the ideas in the design of a scheme for classification should be further investigated.

45 The growth pattern of a living organism should not be over-emphasised, but as stated earlier (See Category 41 above), it refers mainly to an individual's mode of acquisition of knowledge.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition A1

Proposition A1 was moved by F J Devadason. Miss Rajni Ahuja seconded.

51 Amendment 1

1 M N Seetharaman moved Amendment 1 on behalf of Group C. It read as follows:

"Replace 'Document Finding System' by 'Scheme for Classification'".

Supporting the amendment, Seetharaman said that the term 'Document Finding System' is a very general term. But the pattern of the universe of subjects is studied largely for the purpose of designing a Scheme for Classification. Hence the amendment.

2 Miss V K Malhotra seconded the amendment.

3 T Ranganathan, B S Ramananda, K Chandrasekhara

Sastri, and Prof A Neelameghan pointed out that the term 'Document Finding System' included not only a scheme for classification but also the library catalogue. It is supplemented by personalised reference service. In all these, the analysis of subjects is involved. The amendment restricts the scope of the proposition.

The general consensus was against the amendment.

52 Amendment 2

1 Derek Langridge moved Amendment 2. The amended proposition read as follows:

"In the design of a document finding system, it is helpful to recognise the universal view of the pattern of growth of the universe of subjects expressed by some thinkers."

2 S V Sangameswaran seconded the amendment.

M N Seetharaman, M M Kashyap, Krishna Kumar, T Ranganathan, M V Ranga Rau, B L Gupta, B S Ramananda, B Rajannan and P Pratapalingam, suggested the deletion of the term 'universal' from the amended proposition. They felt that this epithet did not add anything to the original proposition: but on the other hand, it gave the impression of the need for evaluating the view of specialists from the point of universality.

Langridge agreed to drop the term 'Universal'.

The modified version of Amendment 2 was accepted by the house.

53 Amendment 3

1 B D Baliga moved Amendment 3. It read as follows:

"In the design of document finding system, it is helpful to recognise the specialists' views of the pattern of the subjects concerned."

Baliga said that the members of his group felt that Proposition A1 restricted the study only to the patterns of growth in the universe of subjects, and that they wanted to utilise the specialist's view of the pattern of growth in each individual subject.

2 B L Gupta seconded the amendment

Opposing the proposition M A Gopinath said that Amendment 3, as explained by the mover, suggested new work and it amounted to a new proposition. But Proposition A1 was based on Paper AA which discussed the pattern of Growth of the Universe of Subjects only. Therefore, Amendment 3 may be taken as suggestion for further work.

The house accepted this suggestion.

PROPOSITION A2.

1 STATEMENT OF PROPOSITION A2

It would be helpful to deem each of the following subjects and similar ones as a Specials Basic Subject with Public Health as the Host Main Subject.

1 Tropical public health;
2 Public health in developing countries;
3 Industrial public health;
4 Ship sanitation; and
5 Sanitation in aviation. /‾Paper AB_7.

2 PRESENTATION OF PAPER AB

Miss Rajni Ahuja presented the salient points of the work reported in Paper AB. She said:

In the preview of the forthcoming Ed 7 of Colon Classification, Dr Ranganathan has enumerated 'Public Health' as a Main Subject. This he has done in view of the developments in the universe of subjects in general and in the field of "Public Health" in particular. Paper AB studies the Subject 'Public Health' from the following aspects:

1 Stages of development;

2 Significant contributions in the different stages of its development;

3 Major topics of interest to the specialist in public health;

4 Dominant characteristics of the different subjects falling in the field of Public Health;

5 The interest of the specialist in Public

Health in environmental health services including the inspection, supervision, and sanitary control of water supply, sewage disposal, milk production, distribution, food handling, collection and analysis of vital statistics, operation of community hopsitals, nursing homes, rehabilitation centres, community health planning, consultation and information dissemination.

The specialist in public health also draws ideas from a variety of disciplines, such as the following: Chemistry, Sanitary Engineering, Biology, Microbiology, Veterinary Medicine, Medicine, Nursing, Dentistry, Psychology, Education, Economics, International Relations, Sociology, Social work, Law. The paper also points out the relation of Clinical Medicine and Social Medicine to Public Health.

The scope of each of the interdisciplinary subjects, such as Medical Sociology, Human Ecology, Social Anthropology, Social Paediatrics, Social Geriatrics, and Social Pathology, that contribute ideas to studies in public health is briefly outlined.

From the data presened in the paper, the steady increase with time in the number of contributions to the field of Public Health is evident.

Examples of possible Specials Basic Subjects with Public Health as the Host Main Subject are the following:

1 Tropical Public Health;
2 Public Health in developing countries;
3 Industrial Public Health;
4 Ship Sanitation; and
5 Sanitation in aviation.

These can be formed by using the "Environment" characteristic. Similarly, Specials Basic Subjects, such as Child Public Health, Geriatric Public Health can be got on the basis of the characteristic "Age"; and Public Health for Women by the characteristic "Sex". Thus, the formation of Specials Basic Subjects in Public Health and in Medicine appear to be analogous.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Similarity in the formation or Specials Basic Subjects with Medicine and Public Health as Host Main Subjects respectively.

32 Any likely conflict of the Specials Basic Subjects in Public Health with those in Medicine.

33 Further sub-division of Specials Basic Subject in Public Health.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Viewing the formation of Specials Basic Subjects with "Public Health" as host Main Subject, as similar to that of Specials Basic Subject with "Medicine" as Host Main Subject, is helpful both from the point of view of subject specialists as well as in the design of schemes for classification.

42 The possibility of any conflict between the Specials Basic Subjects going with Medicine and those with Public Health has to be examined further.

43 Subdivision of Specials Basic Subjects going with Public Health is not likely to give rise to any difficulty.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition A2

Proposition A2 was moved by Miss Rajni Ahuja. H L Amga seconded.

The Chair suggested that since Amendments 1 and 2 referred to the same point they may be taken together for discussion.

51 Amendment 1

1 T Ranganathan moved Amendment 1 on behalf of Group G. It read as follows:

"Replace 'Industrial Public Health' by 'Occupational Public Health'.

Supporting the amendment, Ranganathan said that the term 'Occupational Public Health' gives a wider scope for the Specials Basic Subject than the term 'Industrial Public Health'. For example, the Public Health aspect of 'Taxi Drivers' is not covered by the latter term.

2 K Chandrasekhara Sastri seconded.

52 Amendment 2

1 B S Ramananda moved Amendment 2 on behalf of Group B. It read as follows:

"Replace 'Ship Sanitation' by 'Navigation Sanitation' and add at the end of the proposition '6 Public Health in Developing countries'.

Supporting the Amendment, Ramananda said that the term "Navigation Sanitation" is more comprehensive than the term "Ship Sanitation". He said that Group B felt the "Public Health in Developing Countries" is gaining literary warrant. Therefore, it should be inlcuded in the Proposition.

2 B S S Gupta seconded.

53 Discussion on Amendments 1 and 2

Prof Neelameghan pointed out that the Specials Basic Subject enumerated in Proposition A2 are by no means exhaustive. But these are listed just to indicate the kind of the Specials Basic Subjects that may go with the Host Main Subject "Public Health".

P N Kaula and DB Eswara Reddy doubted whether "Public Health in Developing Country" can be taken as Specials Basic Subject.

Prof Neelameghan said that the restriction is based on an Extranormal environment -- namely, "Developing Country". Hence, it is taken as Specials Basic Subject based on "Environment" characteristic.

D W Langridge felt that the present way of recognising a Basic Subject was not based on any set of criteria whereas earlier there was some kind of rationale in recognising a Basic Subject. He felt that we are letting loose a floodgate of all kinds of Basic Subjects without adequate theoretical basis.

M A Gopinath said that it was wrong to say that there was no rationale behind the recognition of Basic Subjects. We have some guiding principles. The few guidlines for recognising a Basic Subject were:

1 A subject which calls for special schedules of special isolates forming facets of a set of compound subjects going with one and the same host subject.

2 A subject which has to be taken as the core subject and in which one cannot distinctly recognise isolate facets. That is, subject not having any isolate facets. In other words, a subject which cannot be expressed as the compound subject going with any one of the already known Basic Subjects; and

3 A subject which has some specialisation in academic circles -- such as, in forming Departments of Universities, having Degree Courses, Periodicals, etc. But these are by no means definite and exhaustive. We have to gain more experience by our study about the structure, formation, and development of different subjects.

The general consensus of the house was that the original Proposition A2 accommodated the ideas sought to be included by the Amendments 1 and 2. Hence, the Proposition A2 in its original form was accepted.

DRTC Seminar (7)(1969). NC.

PROPOSITION A3.

1 STATEMENT OF PROPOSITION A3

It is more helpful to deem the variants of one and the same system of Psychology as an independent system and classify them as such, rather than placing them with the 'parent' system. ⎡Paper AC⎦.

2 PRESENTATION OF PAPER AC

M P Sinha presented the salient points of the work reported in Paper AC. He said:

" I have taken the subject "Psychology" as a case study to obtain some experience in the study of the implications of the structure and development of the universe of subjects by a librarian and also to know how to relate the findings of such study in the designing of an efficient document finding system".

The paper gives information about the scope of Psychology and its relation with other subjects. Major topics in Psychology is charted.

In discussing the developmental history of Psychology, its origin, mode, stages, trend, and rate of development have been treated. Four major kinds of treatment have been recognised. In its early stage of development, Psychology was religion-based and philosophy-based. Eighteenth century was an age of empirical study and measurement. In the last quarter of the nineteenth century, as in the case of several other subjects, Psychology also came to be regarded as a discipline independent of Philosophy.

The year 1897 is usually considered as the beginning of modern Psychology. William Wundt, the father of modern Psychology paved the way in which the new science should move. However, from the year 1900 the situation changed radically and several systems or schools of thought emerged. In dealing with the developmental history only three major and influential systems have been discussed and the variants of each of these systems have been mentioned in the paper. From about 1930, excepting the Psychoanalytic System, the distinction between the systems of Psychology appear to be gradually fading. The study of the developmental history helps the librarian to recognise:

1 The significant contributors and contributions;

2 Sources of characteristics for the divisions of the subject;

3 The trend of literary warrant;

4 Specialists view of some of the aspects of the subject; and

5 The mode and trend of development of the object.

Sections 4 to 6 of the paper deal with the content of the subject -- general framework -- input, central and output processes, methods, and technique of study and the postulates. These also help in recognising the isolates to be enumerated in the schedule for classification of Psychology.

Sec 7 of the Paper examines the treatment of Psychology in some of the major schemes for classification. The assignment of Main Class status to Psychology fixing its position in the schedule of main classes in CC is also dealt with.

In recent years Psychology is being applied in a variety of fields, as an aid to solving problems of human behaviour and in the study of interpersonal and group behaviour. It is also seen that Social Psychology and Applied Psychology have in recent years developed into self-sustaining disciplines and attracting to themselves considerable literary warrant. In a scheme for classification each of them may claim treatment as a Basic Subject. The Paper also discusses the possible kinds of formation of new Basic Subjects with Psychology as the Host Main Subject and the arrangement of documents on the variants of the major systems of psychology.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 The advantages and disadvantages of the suggested arrangement of variants of a system of psychology in a specialist library serving psychologists and in a generalist library; and

32 Methods of meeting special requirements, such as bringing together the variants of a system of psychology in juxtaposition to the appropriate parent system.

4 GROUP DISCUSSION

There was general agrement among the members of the group on the following points:

41 It is more helpful to keep the variants of a system with the parent system. But, because of the difficulty in recognising the variant of a system -- as there are divergent opinions even among specialists -- it may not be possible to group together all the variants of a system to the satis-

faction of even the majority of specialists in the subject. Hence, the variant of a system should preferably be treated as an independent system for the purpose of classification.

42 However, an alternative arrangement of the variants of a system could be provided for in the catalogue in library, if necessary. The catalogue may be used to collect together with the least loss of time, all the documents available on a system and its variants. Personalised Reference Service and collection-formation will be of help.

5 DISCUSSION IN PLENARY SESSION

51 Moving of Proposition A3

Proposition A3 was moved by M P Sinha.

H L Amga seconded.

52 Amended Version of the Proposition

T N Rajan moved the amended version of Proposition A3 on behalf of Group F. It read as follows:

"It is more helpful to deem such variants as are having sufficient literary warrant, although they belong to the same system of psychology, as independent systems and classify them as such, rather than placing them with the 'parent' system."

Supporting the amendment, Rajan said that in Psychology there were a number of variants of each system. Many of these variants do not have any literary warrant. Therefore, Group F felt that it would be better to bring out this point in the proposition.

V P Vij seconded.

D W Langridge objected to the use of the term 'Literary Warrant'. He said that the term as used in the amended version of the proposition connotes a shade of meaning that is different from that of its originator Wyndham Hulme.

Prof Neelameghan said that the term 'Literary Warrant' is a homonym. It denoted either

1 The existence of a large number of documents on a particular subject; or

2 The recognition of the existence of the idea concerned necessitating the librarian to take certain action.

Group F might have taken the term 'Literary Warrant' in both the senses.

M P Sinha said that the amended version is not necessary. Because, a scheme for library classification would introduce a subject or an isolate, only when it occurs in at least one document. Therefore, the original proposition, by implication, included what was sought to be brought out by the amended version.

The general consensus of the house was against the amended version. Hence, the original Proposition A3 was accepted.

DRTC Seminar (7)(1969). ND.

PROPOSITION A4.

1 STATEMENT OF PROPOSITION A4

The Spiral of Scientific Method is helpful in differentiating the sciences from the non-science disciplines. [Paper AD].

2 PRESENTATION OF PAPER AD

H C Revannasiddappa presented the salient points of the work reported in Paper AD. He said:

1 The mode of development of the universe of subjects is one of the factors affecting the design of a scheme for classification, and reference and documentation services.

2 The mode of development of the universe of subjects may be considered in different ways. The work of developing certain subjects of the universe of subjects may conform to what is generally known as the Scientific Method. This can be visualised in the form of a spiral -- that is, the Spiral of Scientific Method (vide Fig 1 in P73 of Paper AD). The study of a subject amenable to development according to the Spiral helps to

1 Learn something about the intrinsic attributes of the subject;

2 Learn about the stages of the development of the subject;

3 Understand better the kind of work involved and the kind of ideas produced in the different stages of development of the subject;

4 Envisage the different patterns or modes of development in the universe of subjects;

5 Study comparatively the modes of development of different subjects and of groups of subjects;

6 Predict the likely trend of developments in a subject;

7 Examine the relative affinity among large regions of knowledge;

8 Observe the interaction between different subjects at the level of collection of data and at the level of fundamental laws and their applications to specific cases in each subject; and

9 Get a proper historical perspective of the development of a subject or of the universe of subjects as a whole.

In Paper AD, the developments leading to and the formulation of some of the Laws of Conservation are dealt with. The threat of failure of the Laws of Conservation of Mass and of Energy in the case of radioactivity and the solution given by the Special Theory of Relativity are mentioned. Failure of a fundamental law to account for a phenomenon is illustrated by the failure of the Law of Conservation of Strangness and the Law of Conservation of Parity in the case of weak interactions among elementary particles. Some inferences drawn about the subject Physics on the basis of this study are that:

1 Physics is a subject amenable for cultivation according to the Spiral of Scientific Method;

2 Physics has completed at least one cycle in the Spiral;

3 There is a close relation between subjects in the field of Physics and those in the field of Chemistry;

4 Some Conservation Laws do not hold good in the

case of elementary particles;

5 The development of new ideas becomes necessary for a correct explanation of the phenomenon observed;

6 There is need for development of new and sophisticated instruments for testing and measuring to confirm or disprove predictions in the fields not envisaged earlier;

7 The use of instruments and techniques necessitates the co-operative action of a team of specialists in different subjects; and

8 The stage of development of the subject may indicate the likely trends in it in the near future.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Helpfulness of the use of the Spiral of Scientific Method for the study of the mode of development of subjects·

32 Other methods of differentiating between a science and a 'non-science' discipline·

33 Subjects where the application of the Spiral of Scientific Method may not be helpful.

34 Incidence of deductive process in the Spiral of Scientific Method.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following:

41 The Spiral of Scientific Method is helpful in determining the stages of the development of a subject. Case studies based on the Spiral of Scientific Method, for a large number of subjects, should be made.

42 Any method which tries to differentiate a "Science" from "Non-science" is likely to be similar to the Spiral of Scientific Method.

43 The Spiral of Scientific Method gives a generalised picture of the various stages of development of a subject. It must be remembered that every subject may not have all the four quadrants. Some may have only quadrants 3 and 4. Mysticism has quadrant 3 only. Physics has all the four quadrants.

It is postulated that a subject which completes at least one cycle in the Spiral -- that is, all the four quadrants are incident in its development -- may be deemed a "science".

44 The deductive process (quadrant 4) as postulated in the Spiral of Scientific Method is helpful and necessary. The controversy about this aspect of development of a subject leads only to further generalisation in which no distinction between inductive and deductive process is made.

5 DISCUSSION IN PLENARY SESSION

51 Moving of Proposition A4

Proposition A4 was moved by H C Revannasiddappa, Miss Rajni Ahuja seconded.

52 Amended Version of the Proposition

M A Gopinath suggested that all the three amended versions of the proposition pointed to one thing -- that is, deletion of the term 'Non-Science'. Therefore, they may be taken together for discussion. The house accepted.

0 The Chairman asked the house to choose one of the amended versions for discussion. The house accepted Dr D B Krishna Rao's suggestion that the amended version 3 be taken up for discussion.

1 Dr D B Krishna Rao moved the amended version. It read as follows:

"The Spiral of Scientific Method is helpful in differentiation of the sciences from other disciplines".

Supporting the amended version Dr Krishna Rao said that the term 'Non-science' was somewhat critical and it would be better to replace by the term "other disciplines".

2 Miss V K Malhotra seconded.

D W Langridge and P N Kaula supported the amendment and said that the term 'Non-Science' was not an accepted one and it should be deleted. Prof A Neelameghan that the 'Non-Science' was used in the Brittannica perspectives to distinguish 'Science' disciplines from 'Non-science' disciplines. The mover of the original proposition H C Revannasiddappa favoured the amendment.

The general consensus of the house favoured the amended version.

DRTC Seminar (7)(1969). PA.

PROPOSITION B1.

1 STATEMENT OF PROPOSITION B1

In a complex subject presenting Bias Phase Relation, it is more helpful to have as the subject of Phase 1, the Biasing Phase rather than the Biased Phase. [Paper BB]

2 PRESENTATION OF PAPER BB

M A Gopinath presented the salient points of Paper BB. He said:

The work reported in paper BB was initiated with the objective of examining

1 The different kinds of subjects embodied in books in which two subjects may be dealt with in relation to each other, with particular reference to Phase Relation -- that is, Complex Subject; and

2 The kinds of relation arising among the components of a complex subjects embodied in the books.

For this purpose, we selected 258 books from about 16,000 documents listed in the Publishers' trade list annual (1965). All these books involved relation between two subjects. These were then broadly grouped into these involving phase relation and those not. Nearly 48 per cent of the books involved Phase Relation. Of those, Bias Phase Relation and Influence Phase Relation accounted for 70 per cent. Comparison Phase Relation accounted for about 9 per cent and General Phase Relation about 18 per cent.

Among the subjects not involving Phase Relation, 55 per cent accounted for Facet Relation between two subjects. Subjects involving facet relation, involved different kinds of (1M1) isolates, such as "Basis", "Interpretation", and "Method" as "Link isolates" between two subjects. For example, subjects such as "Biological basis of human behaviour", "Psychological interpretation of Religion" and "Mathematical methods in chemical engineering".

The subjects involving different kinds of Phase Relation are further grouped as "Dynamic Phase Relation" and "Passive Phase Relation". Each of the Bias Phase Relation, Tool Phase Relation, and Influencing Phase Relation is dynamic. For, in each of these cases, one subject produces some kind of impact on the other subject. The General Phase Relation Comparison Phase Relation, and Difference Phase Relation, are taken to be Passive as there is no mutual impact among the component subjects.

A study has been made about the sequence of component subjects involving Phase Relations. A case has been made out for making the Biasing Phase as Phase 1 and Biased Phase as Phase 2. For, if the complex subject involving Bias Phase Relation is placed in the Biased Phase, it will not reach the majority among readers. For, the majority among readers seeking such books are those who are specialising in the Biasing subject. For example, a book embodying a subject, such as "Psychology for teachers" is of interest largely to teachers. But, according to the Rules of CC on Bias Phase, the book will be placed in Psychology; it is a violation of Canon of Helpful Sequence. This canon states in essence that the sequence of subjects in a group of subjects should be helpful to those who are specialising in it. Further, placing of such subjects in Biasing Phase, brings together different subjects which are oriented to the needs of the specialist readers. Hence, the Proposition B1.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Relative helpfulness to the majority of readers of the suggested method of classifying a subject presenting a Bias Phase Relation.

32 The suggestion in relation to other kinds of Phase Relation, such as Application and Influence.

33 Proposition in relation to modes of development in the universe of subjects.

34 It may be more helpful to arrange all kinds of phase relation of two different compound or Basic Subjects in one continuous sequence.

35 Proposition B1 in relation to particular kinds of libraries.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following ponts:

41 It is helpful to place the Complex Subject involving Bias Phase Relation, in the Biased Phase rather than the Biasing Phase. For, the subject expounded is the Biased Phase and the Biasing Phase represents only a group of specialists -- it is not a subject. Library classification is fundamentally based on subject-content of the book.

42 In the case of Application and Influence Phase Relations, the affected subject is the first Phase. The interest of specialist is in the affected

subject not the subject "Applied", but in the subject to which it is applied Similar is the case with influencing phase.

43 The mode "loose assemblage" represents Phase Relation. There may be certain gradation of strength of bond from General Phase Relation to Influence Phase Relation.

44 The arrangement of the different kinds of Phase Relation between any twocomponent subjects in one continuous sequence may not be helpful. But, it requires further examination.

45 The Proposition is a general one and it raises a fundamental issue in library classification.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition B1

Proposition B1 was moved by Prof A Neelameghan. M A Gopinath seconded.

51 Amendment 1

B L Gupta moved the Amendment 1 on behalf of th Group H. It read as follows:

"Insert the words "in a specialist library" at the end of the proposition".

Supporting the amendment, B L Gupta said that the suggestion contained in the proposition may not be helpful in all libraries. For, it seems to be against the general principles of classification. However, the suggestion would be of help in a specialist library. Hence the amendment.

B S S Gupta seconded.

S V Sangameswaran and M A Gopinath opposed the amendment and said that the Proposition was a general one and it suggested the change in the sequence of component subjects in a complex subject involving Bias Phase Relation. This is a problem in the analysis of subject and its classification. This does not vary according to the kind of libraries.

The general consensus was against the amendment.

52 General Discussion on Proposition B1

The House wanted full discussion on the original Proposition itself and the Chairman allowed it.

M V R Rau and M V Gopinath opposed the proposition and said that the proposition is against the fundamental idea that library classification is the classification of subjects embodied in documents. For, in a subject involving Bias Phase relation, the primary subject is the Biased Phase and not the Biasing Phase. The latter comes only in the exposition aspect. For example, in the complex subject "Statistics for Engineers", Statistics is the Biased Phase and Engineering is the Biasing Phase. Here "Statistics" is expounded in such a way as to help the "Engineer" and there may be not much of "Engineering" in the document. It would be wrong to deviate from the overall general principle of classification by subject, because it does not give helpful sequence in this case.

Explaining the purpose of the Proposition, Prof Neelameghan said that the basic issue involved is helping the reader to get his document. The purpose of library classification is to do this pin-pointedly, exhaustively, and expeditiously. In the case of Bias Phase Relation, the target is mainly the reader specialising in the "Biasing Subject" and not the one specialising in the "Biased Subject". According to the existing rules in CC, the document embodying a subject involving Bias Phase Relation, will be placed in the Biased Phase. This obviously is not helpful to the majority of readers.

Girja Kumar and Dr D B Krishna Rao said that the spirit of the proposition is good and some way of reconciling the conflict between the classification by subject and helpfulness to the reader should be found out.

Prof Neelameghan said that the real purpose of the proposition is to bring to the surface this conflict and find out ways of overcoming it.

The general consensus of the house was for deferring a decision on the Proposition.

DRTC Seminar (7)(1969). PB.

PROPOSITION B2.

1 STATEMENT OF PROPOSITION B2

It is helpful to deem psychosomatic medicine as a Fused Main Subject. [Paper BB]

2 PRESENTATION OF PAPER BB

(See Sec 2 of Chap PA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Definition and scope of "Psychosmatic Medicine".

32 Alternative methods of classifying psychosomatic medicine and their relative helpfulness to specialists in psychosomatic medicine.

33 Psychosmatic medicine in relation to the criteria for determining a Fused Main Subject.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Psychosmatic medicine stresses the psychobiological unity of the human being. The close interaction between mind and body in health and disease, and the role that the mind may play in the genesis and control of diseases of body. In other words, it is the psychological study of the state of human body.

42 The "Psychosomatic" concept could be taken

as an Isolate Facet of Medicine. It could also be taken as a derived isolate of "4 Disease" in L Medicine in CC. Then, it could occur with any one of the Personality Isolates forming a component of a Compound Subject going with "L Medicine". But this would scatter psychosmatic medicine into different pigeonholes. For example, "Psychosomatic aspect of Dentistry" would go with Dentistry, and "Psychosomatic aspect of Cancer" would go with Cancer. On the other hand, if psychosomatic medicine is taken as a Main Subject all the compound subjects going with it would get arranged in a filiatory sequence; this would be more helpful to the specialist reader.

43 Psychosomatic medicine satisfies the criteria for deeming it a Fused Main Subject. Further studies should be made of the different kinds of compound subjects involving psychosomatic medicine.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition B2

1 Proposition B2 was moved by M A Gopinath. He said:

In recent years, the compound subjects involving the concept of "Psychosomatic Medicine" involved certain isolates which are peculiar to psychosomatic medicine. By its very definition, the subject "Psychosomatic Medicine" is a fused subject involving Medicine and Psychology as Parent Main Subjects.

2 Prof A Neelameghan seconded.

51 Amendment 1

1 A H Kidwai moved Amendment 1 on behalf of

Group B. It read as follows:

"Delete "fused" from the proposition".

2 B S Ramananda seconded it.

3 Opposing the amendment, M A Gopinath said that the subject "Psychosomatic Medicine" is by its very definition satisfies the criteria for deeming it a Fused Main Subject. If at all it is taken as a Main Subject, it should be taken Fused Main Subject.

4 Dr D B Krishna Rao supporting the amendment, said that the spirit of the original proposition is to deem the subject "Psychosomatic Medicine" as a Main Subject. Whether it is due to fusion, distillation or postulation need not be brought in.

5 The general consensus of the house was in favour of the amendment.

DRTC Seminar (7)(1969). PC.

PROPOSITION B3.

1 STATEMENT OF PROPOSITION B3

A set of criteria should be evolved to distinguish an Energy Isolate from a Property Isolate. ⁄⁻Paper BC_7.

2 PRESENTATION OF PAPER BC

Prof A Neelameghan described the salient points of Paper BC. He said:

Since 1966, all the isolates enumerated in the different schedules under the heading "Foci in ⁄⁻E_7 cum ⁄⁻2P_7" in Colon classification (ed 6;1960) has been investigated. Most of the isolates enumerated in these schedules were taken to be Property Isolates and deemed to be manifestation of Matter.

However, some of the isolates posed problems in identifying their manifestation. The ideas denoted by most of these are action-associated ideas. The differentiation of Energy Isolate from Property Isolate has been a problem.

Paper BC contains a suggestion. If the manifestation of an action-associated isolate idea is considered in the total subject-context in which it occurs, there is a possibility of each and every one of such isolates being deemed a Property Isolate. Such a procedure is unhelpful. If the action associated Isolate Idea denotes a function or an "Action" by an external agency, it is likely to be a manifestation of the Fundamental Category Energy. If it is an "Action" inherent in an entity or phenomenon and thus dependent for its connotation on the context provided by its preceding facets, it may be deemed a Property.

This is only a broad guideline. Further experiments are to be done to evolve specific principles.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Differentiating with the aid of the concept "Action".

32 Differentiating with the aid of the subject context in which it occurs.

33 Differentiating with the aid of the concept of "qualifiers to Energy" and "Levels of Energy".

4 GROUP DISCUSSION

There was general agreement among the groups on the following points:

41 Any Isolate Idea which connotes the "Action by an external Agency" should be deemed to be manifestation of Energy.

42 Concept of qualifier to Energy Isolate should be examined.

43 Comprehensive schedules for Energy Common Isolates and for Property Common Isolates should be developed.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition B3

1 Proposition B3 was moved by Prof A Neelameghan.

2 M P Sinha seconded.

3 There were no amendments.

DRTC Seminar (7)(1969). PD.

PROPOSITION B4.

1 STATEMENT OF PROPOSITION B4

In a Compound Subject, an idea denoting a Property qua Property need not be considered as an isolate, but only as a Kernel Idea that can be attached to any other isolate or Basic Subject forming the components of a compound subject; the sequence between the two, Host Isolate or the Basic Subject and the Kernel Idea denoting Property, being determined by the Wall-Picture Principle or its corollaries. [Paper BD].

2 PRESENTATION OF PAPER BD

Prof A Neelameghan presented the salient points of Paper BD. He said:

Work on Property Isolate idea came into prominence about 1967, when it was recognised that most of the isolates hitherto deemed to be manifestation of the fundamental category Energy should be deemed Property Isolates and therefore manifestation of the fundamental category Matter. But this change in recognising the manifestation of fundamental category has led to new problems in facet analysing a subject.

Paper BC discusses one such problem.

Property, by its very definition, is always associated with or is dependent upon the other Isolate ideas and the Basic Subject of the compound subject in which it occurs. This kind of association is not reflected in the facet analysis and in the class number for some compound subjects. For, according to the Postulate of Level Cluster different levels of manifestation of one and the same fundamental category and in one and the same round should come together. Thus, all the (1P) isolates should cluster together and all (1M) isolates should cluster together. This obviously separates, as indicated in Paper BD, the (1P1) isolates and its porperties and (1P2) isolates and its properties. This gives a distorted picture of the subject to be analysed. In order to avoid this anomaly, the idea denoting a property of an entity occurring in a subject may be treated as a kernel idea not amounting to an isolate. The following example illustrates this:

Subject: Measurement of the size of particles entrenched in seeds and blisters of glass

Transformed Title: (Taking property as Matter Isolate) Production Technology (BS). Glass [1P1]. Defect - Seeds and blisters [1MP1]. Particles [1MM1]. Size [1MP2]. Measurement [1E].

The representation of the concept "Particle entrenched in seeds and blisters of Glass" is distorted in the above analysis, according to the postulate of level cluster, and of Decreasing Concreteness between Matter (Material) and Matter (Property). The Transformed Title given above gives, however, a sequence of ideas in conformity with the sequence derivable according to the Wall-Picture Principle. For, in the context of the subject of the document under consideration, unless the concept of "seed in glass" is conceded the concept "Particle in seeds" cannot become operative. In order to avoid this conflict between the two principles both of which give generally helpful sequence in a majority of the cases, the Property may not given the status of the isolate but taken as kernel idea which can be attached with any isolate.

With this modification, the Transformed Title of the subject will be as follows:

Production technology (BS), Glass [1P1]. Defect-seeds and blisters (Property). Particle (in seeds) [1M1]. Size (Property). Measurement [1E].

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Factors necessitating the change of concept regarding Property.

32 Any violation of the guiding principles and postulates of classification.

33 Advantages of the suggestion.

4 GROUP DISCUSSION

There was general agreement among the groups on the following points:

41 As explained in Paper BD, there is a likelihood of some mix up in the sequence of isolates in compound subjects involving a Property Isolate. However, one should be careful in the subject-analysis.

42 This is a case of violation of the Postulate of Level Cluster.

43 To avoid this violation, the suggested solution in proposition B2 may be adopted. Further investigations should be made to examine the helpfulness of the solution.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition B4

1 Proposition B4 was moved by Prof A Neelameghan.
2 F J Devadason seconded.
3 There were no amendments to the Proposition.

DRTC Seminar (7)(1969). QA.

PROPOSITION C1.

1 STATEMENT OF PROPOSITION C1

A post-determined subject heading should be preferred to a pre-determined one in the case of every document. [Papers CA and CB].

2 PRESENTATION OF PAPERS

21 Presentation of Paper CA

Prof A Neelameghan presented the salient points of Paper CA. He said:

In the Classified Catalogue System, the specific entries for subjects going with the different Basic Subjects, and those for compound subjects going with one and the same Basic Subject are brought together and arranged in a filiatory sequence. All the features of the Classified Catalogue System, excepting the 'Filiatory Sequence' of subjects can be incorporated in the Dictionary Catalogue System by

1 Making the Postulates of Facet Analysis and Principles of Facet Sequence as the basis for its subject catalogue; and

2 Adopting the Forward-Rendering Method for the Specific Subject Heading determined on the basis of the Title-in-Standard-Terms arrived at in Step 5 of the Method of Postulates.

A General Subject Entry prepared on the basis of the Title-in-Standard-Terms arrived at in Step 5 of the Method of Postulates and by using each of the sought terms as the First Heading followed by the other terms in it as in a cyclical permutation, provides access to the specific subject entry by any Sought Term occurring in the specific subject heading.

To help in determining the Specific Subject Heading in the Heading of a General Subject Entry itself and to obviate the need of mentioning the Referred-to-Heading, a virgule (/) and a full stop (.) are used to indicate its beginning and end respectively.

22 Presentation of Paper CB

M A Gopinath presented, on behalf of Dr S R Ranganathan, the salient points of Paper CB. He said:

Pre-determined Subject Headings such as the ones suggested in the LC Subject headings list are incapable of meeting the challenges thrown forth by the growing universe of subjects. It imposes rigidity on the analysis needed to arrive at coextensive subject-headings. On the other hand, the post-determination of subject headings, based on a set of postulates used in arriving at the Class Number can give a fully co-extensive subject heading. Examples are given in Paper CB to show the

1 Near-concurrence to this idea found in the British national bibliography;

2 Partial concurrence to this idea found in the NLM Medical subject headings; and

3 Divergence from this idea found in the LC Subject headings list.

The post-determination of subject headings are discussed in relation to the syntax of the ideas in the Forward Multiple Subject Headings and in the Reverse Multiple Subject Headings used for See Reference.

DRTC is engaged in removing some of the residual difficulties in Subject Heading determination and rendering. The issue of the relative helpfulness in document finding systems, of the use of natural language and of classificatory language respectively for expressing multiple subject headings also needs investigation.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Relative advantages of post-determined subject heading.

32 Source of the terms for subject heading.

33 Control of vocabulary for post-determination.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Post-determined subject heading is capable of representing the subject-co-extensively. This may not always be possible in the case of pre-determined subject heading. Further, post-determination of subject heading gives freedom for arranging the component headings in the sequence suggested by the subject of the document.

42 The terms in the system for post-determining of subject heading can be taken from schedules of library classification using standardised current terminology or from thesauri of standard terms for different subjects developed for the purpose.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition C1

1 Proposition C1 was moved by Prof A Neelameghan.

2 H L Amga seconded.

51 Amendment 1

1 B S Ramananda moved Amendment 1 on behalf of Group B. It read as follows:

At the end of the proposition add ", classified according to a co-extensive scheme for classification".

Supporting the amendment, Ramananda said that it would be helpful to explicitly state in the proposition the symbiotic relation between the twin techniques of classification and cataloguing. Further, it is necessary to avoid duplication of subject-analysis -- one for subject heading and another for class number determination.

2 A H Kidwai seconded.

3 F J Devadason, Miss R A Nagarathna, B L Gupta, T N Rajan and M A Gopinath opposed the amendment and said that the scheme for classification need not be brought into the proposition. M A Gopinath said that Papers CA and CB bring out the point that the analysis for subject heading need not necessarily be tied up with a scheme for classification.

4 The general consensus of the house was against the amendment.

PROPOSITION C2.

1 STATEMENT OF PROPOSITION C2

The method for the subject analysis for the post determination of a subject of a document is the same as the systematic one based on postulates used in the post-determined class number. [Papers CA and CB].

2 PRESENTATION OF PAPER

(See Sec 2 in Chap QA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Influence of the theory of classification and the scheme for classification on the post-determination of subject heading.

32 Alternative methods of post-determination of subject heading.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 There need not be undue influence of a scheme for classification on the system for deriving post-determined subject heading. But the use of the same set of postulates for classification and for arriving at subject heading is a help and may play roles complimentary to each other.

42 As an alternative to the suggested method, we have to develop a system of postulates and thesauri

for each subject to be used for post-determination of subject heading. But this is not very different from what we do in designing and developing a scheme for classification.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition C2

1 Proposition C2 was moved by M A Gopinath.

2 It was seconded by Prof A Neelameghan.

51 Amendment

1 M A Gopinath moved Amendment 1 on behalf of Group E. It read as follows:

"Insert 'heading' between 'Subject' and 'of' in line 2."

2 B S S Gupta seconded.

The house accepted the amendment.

PROPOSITION C3.

1 STATEMENT OF PROPOSITION C3

The result in Step 5 (Title-in-Standard-Terms) of the systematic method of the post-determination of Class Number of a document gives the post-determined subject heading. [Papers CA and CB].

2 PRESENTATION OF PAPERS

(See Sec 2 in Chap QA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Rendering of the terms in a multi-worded Subject Heading in relation to the Classified Catalogue and the Dictionary Catalogue.

32 Relative advantages and disadvantages of the two methods of rendering a multi-worded Subject Heading.

33 Economy in input.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 It is helpful to render a multi-worded Subject Heading for subject entry in Dictionary Catalogue, as it occurs in the sequence obtained in Step 5 of the Systematic Method.

42 The reverse sequence of the component headings occurring in Step 5 would be more helpful in the case of the alphabetical part of the Classified Catalogue.

The classified part of the Classified Catalogue caters to the other approach.

43 Considerable economy in input can be effected, if clearcut guiding principles are explicitly stated, in arriving at co-extensive Subject Headings.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition C3

1 Proposition C3 was moved by M A Gopinath.

2 Prof A Neelameghan seconded.

51 Amendment

1 M A Gopinath moved the amended version of Proposition C3, on behalf of Group E. It read as follows:

"The Title in Standard Terms (the result of Step 5 of the systematic method of post-determination of the class number for a document) gives the subject heading in the case of a Dictionary Catalogue. But the reverse sequence of the terms in the same gives the Class Index Heading in a Classified Catalogue".

2 Supporting the amended version, M A Gopinath said that the original proposition did not specify the sequence of rendering the terms in a multiworded Subject Heading. But the wording of the proposition suggested that the sequence of terms in Step 5 of the Systematic Method of arriving at Class Number, was helpful in the Dictionary Catalogue as well as in the Classified Catalogue.

3 Miss Rajni Ahuja seconded.

4 Opposing the amendment Prof A Neelameghan, M M Kashyap and F J Devadason said that Proposition C3 said that Step 5 gives the post-determined subject heading. It does not say anything about rendering. Further, Proposition C4 discusses the point suggested in the amendment.

The general consensus of the house was against the amendment.

DRTC Seminar (7)(1969). QD.

PROPOSITION C4.

1 STATEMENT OF PROPOSITION C4

In a dictionary catalogue, the particular method of cyclical rendering of the Cross Reference Index Entries, suggested in Paper CA, is more helpful than the one suggested in the Classified Catalogue Code. [Paper CA].

2 PRESENTATION OF PAPER CA

(See Sec 2 of Chap QA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

Advantages and disadvantages of the suggested method of rendering the Cross Reference Index Entries.

4 GROUP DISCUSSION

There was general agreement among the members of groups on the following points.

41 The cyclical method of rendering the heading of Cross Reference Index Entry is helpful to the Reader as well as to the Cataloguer and Reference Librarian.

42 It also helps the elimination of referred to entries, because the context of the first component heading is suggested by the later component headings.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition C4

1 Proposition C4 was moved by Prof A Neelameghan.

2 H L **Amga** seconded.

There were no amendments. The house accepted the proposition.

PARTS R/T : QUANTIFICATION & LIBRAMETRIC STUDIES

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PROPOSITION D1.

1 STATEMENT OF PROPOSITION D1

Statistical Calculus and Operations Research should be suitably utilised in measuring and planning library work and in doing research in library science. [Papers in Parts D to J].

2 PRESENTATION OF PAPERS

21 Presentation of Paper DA

B S S Gupta presented, on behalf of Dr S R Ranganathan, Paper DA. He said:

The term 'Librametry' was coined in 1948 by S R Ranganathan, at the Aslib Conference in Leamington Spa. Dr Ranganathan has given illustrative examples of the use of Statistical Calculus, Operations Research, and Sampling to certain library problems. The examples include the following:

1 Determination of the strength of library staff;

2 Disposition of library staff for circulation work during different library hours;

3 Disposition of library staff for reference service during different library hours;

4 Organisation of library system;

5 Establishing the distinction between "service library" and "dormitory library";

6 Design of library buildings, fittings, and furniture;

7 Book selection;

8 Absolute Syntax and Facet Syntax in relation to classification;

9 Length of Class Number;
10 Variation in style in writing catalogue entries; and
11 Doc-Finder.

Operations Research in the
1 Transfer of a big library from one building to another; and
2 Periodical changes in the sequence of subjects in the shelving of books in the stack room in relation to saving of the time of readers.

Sampling in the
1 Estimation of opinion of readers about library service received by them;
2 Estimation of library use; and
3 Accuracy in cataloguing work.

22 Presentation of Paper DB

H L Amga presented the salient points of Paper DB. He said:

"Law 4 of Library Science -- Save the time of the reader and of the library staff -- demands: 1 Reduction in variety of materials used and in the methods of doing routine and repetitive work; 2 Work simplification; and 3 Work standardisation. Law 5 of Library Science -- Library is a growing organism -- emphasises the dynamic and changing context in which library work is done. Change in the attributes of a component or of a component itself of a system may necessitate modification and adaptation of an existing standard, or the formulation of a new one. Based on a survey of one thousand books, data are presented on the pattern of incidence of certain cataloguing features in books published during the period 1925-1968. Using graphs and the techniques of least squares and analysis of variance, it is shown that the incidence of 1 Single Personal Authorship is decreasing with time; and 2 Two Joint Personal Authorship, Corporate Authorship, Collaborator, and Series is increasing with time and significantly so in the Natural Sciences. There is need to modify any standard set up some years ago for the number of books to be catalogued by a person in a given period. To maintain an earlier performance standard, the methods of cataloguing may have to be changed, or additional hands will have to be utilised. Since there appears to be a predictable trend in the increase of the number of books presenting complexities for cataloguing, the work standard for cataloguing should be reviewed at suitable intervals of time.

23 Presentation of Paper EA

P Jayarajan presented Paper EA. He said:

A scheme for library classification is essentially a scheme for classification of subjects. Therefore, the designer and the reviser of a scheme for classification should have a thorough knowledge of the "structure" and "development" of the universe of subjects.

For this purpose, the classificationist should be able to get reliable data on the attributes of the universe of subjects. This would help him to

1 Give a co-extensive and expressive representation of the subjects embodied in documents; and

2 Keep pace with the developments in the universe of subjects.

Paper EA presents a case study in gathering information on one of the attributes of the universe of subjects. In particular, it presents the study of growth in the number of facets incident in the set of compound subjects going with Medicine. The years chosen for study are 1925, 1951, and 1967. The trend is that the mode of incidence of facets was between 3 and 4 in 1951 and 1967 respectively. It was 2 in 1925. It also showed **that** there is a decrease with time in the percentage of subjects having 1 and 2 facets, and an increase of those with 3 or more facets. This indicates that books published in recent years embody subjects of greater intension than in the earlier years.

24 Presentation of Paper EB

M A Gopinath presented, on behalf of S Seetharama, the salient points of Paper EB. He said:

The title of an article is one of the first points of contact of the reader and of the documentalist, with the subject of the article. Elements in the Title are used in recalling and identifying an article. The title is the starting point in classifying a document by the Postulational Method. Certain kinds of KWIC indexes are essentially based on Titles of documents. A Title that expresses co-extensively the specific subject of an article will be of help in documentation in various ways. Data on the extent of expressiveness of the titles of an assortment of 300 articles appearing in medical periodicals show that only about 3 percent of the titles are less than 50 percent expressive. The ellipses in the title, are of various kinds -- omission of Basic Subject Term, Personality Isolate

Term, Matter Isolate Term, and of Energy Isolate Term. Use of Derived Composite Terms, Synonymous Terms, Homonymous Terms, is also a common feature. A cooperative approach on the part of the Author, Editor, and Documentalist in formulating guiding principles for the construction of helpful expressive titles of articles is necessary.

25 Presentation of Paper FA

Paper FA was not presented as the author Ashis Sen was not present.

26 Presentation of Paper FB

N K Gopalakrishnan presented the salient points of Paper FB. He said:

Paper FB presents only the data on the work of reclassification -- changeover from one scheme for classification to another -- undertaken in a technical library containing about 50,000 volumes. Policy decisions were made with regard to classification, cataloguing, and shelving, in order to secure consistency in work. The paper also details the categories of personnel and the number in each category, the kind of work done by each category of personnel, the daily output per person, sample data on man-hours spent, and the costing of reclassification of a book. The average cost of reclassification of a book works out to Rs 1.25.

27 Presentation of Paper GA

S V Sangameswaran presented the salient points of Paper GA. He said:

In 1963 the research work at the Central Food

Technological Research Institute, Mysore, was reorganised into a number of precisely formulated projects. An efficient local documentation list became a necessity. The monthly Library bulletin of the Institute's Library listing articles under the broad classes of the Colon Classification was not adequate. A depth schedule for Food Technology was designed with guidance from DRTC and a separate minutely classified and adequately featured documentation list was started in July 1966. The different parts of the documentation list are mentioned and the structure of the entries in the classified part and in the alphabetical part is illustrated with examples. The items of work, the sequence in which they are done, and the time taken to do each item in the compilation and distribution of an issue of the documentation list are enumerated. The categories of personnel employed on the different items of work and the costing of an issue of the list are dealt with. There has been a 40 percent reduction over the last three years in the time taken to prepare the documentation list. The reasons for this increased output are mentioned. Steps taken to promote the use of the documentation list in CFTRI, and the useful role the documentation list is playing in keeping the scientists in the Institute, and in similar other institutions receiving the list, are indicated. Some steps to increase the efficiency of the service further are mentioned.

28 Presentation of Paper GB

M V Ranga Rau presented the salient points of Paper GB. He said:

The Current leather literature is a monthly abstracting periodical produced by the Central Leather Research Institute. It is a classified list of entries with abstracts. Besides Leather Science and Leather Technology, it covers articles on Engineering, Chemistry, Chemical Technology, Textile Technology, Polymers and Plastics, Biology, and Agriculture. It also covers patents and reports of conferences on these subjects. A step-by-step analysis of the work, the quantum of professional, semi-professional, and non-professional work involved in the production of an issue of Current leather literature, are mentioned. The ratio of the three categories of man-hours works out approximately as follows:

Professional	:	Semi-Professional	:	Non-Professional
2.5	:	1	:	5.5

It takes a total of about 356 man-hours to produce the documentation list.

291 Presentation of Paper GC

B L Gupta presented the salient of Paper GC. He said:

Documentation service is the name given to Reference Service when the emphasis shifts from generalist reader to specialist reader. It is intensified reference service. Documentation service may be of two kinds; namely,

1 Generalised Documentation Service; and
2 Individualised Documentation Service.

Generalised Documentation Service is documentation service rendered,

1 To a large group of specialists (Individuals or Corporate Bodies such as, Government Departments,

Industries, Institutions, etc);

2 Through a general documentation list containing abstracts on most of the facets of the subjects in which the constituents of the group of specialists concerned are interested; and

3 Without any emphasis on any specific facet or requirement of any particular group within the larger group.

An example of this kind of service is IIP packaging abstracts, supplied to the industries in India.

Individualised Documentation Service is documentation service rendered

1 To a specific group of specialists, whose interest are similar at an optimum level of specialisation; and

2 Through a documentation list containing abstracts only on those facets in which the constituents of the group specialise.

An example of this kind of service may be a documentation list on 'Paper Packaging' supplied to those who specialise in that field.

A survey of the specific requirements of the specialist groups and industries receiving IIP Packaging abstracts is worthwhile doing. Restriction of the coverage of IIP Packing abstracts to subjects of interest to specific groups of specialists, exhaustive coverage of documents in the respective specialised subject areas, and issuing the documentation list in card form, are proposed as first steps in improving the efficiency of documentation service to the specialists in packaging.

292 Presentation of Paper HA

A H Kidwai presented, on behalf of G S Raghavendra Rao, the salient points in Paper HA. He said:

It is helpful to examine periodically the pattern of incidence of different kinds of reference questions put by different categories of readers. Periodical surveys are to be made by the library staff in order to improve and to anticipate short range reference service. The paper presents data on the short range reference questions asked by different categories of readers in a library of an academic-cum-research type institution. The data on the subject-wise distribution of short range reference questions is compared with the subject-wise distribution of the

1 Library's holdings;

2 Books and periodicals issued to readers;

3 Staff, students, and research scholars of the institution constituting the potential users of the library.

Subjects in the field of the Physical Sciences are seen to be the most dominant in each of these cases.

293 Presentation of Paper HB

R K Goel presented the salient points of Paper HB. He said:

Periodical survey of the use of documents by specialists is helpful and necessary. The interview and questionnaire methods of survey may not be economical for an individual library. The pattern of document usage by specialists in the Central Building

Research Institute, Roorkee, was studied through an analysis of the documents cited by them in their research publications. The average age of the documents cited in the CBRI publications was over five years. The extent of use of patents and standards was not appreciable although the research at the Institute was mainly in the applied subjects. Some inferences and suggestions for further investigations are made on the basis of the findings of the study.

294 Presentation of Papers JA and JB

Papers JA and JB were not presented as the authors were not present.

295 Presentation of Paper JC

Prof A Neelameghan presented the salient points of Paper JC. V V Buche explained the statistical analysis part of it. Prof Neelameghan said:

The kind of ideas added, the mode and rate of their addition, and the process of assimilation of ideas in the universe of subjects affect the work of the librarian -- particularly document selection, classification, reference service, and documentation service. Scientific discoveries constitute one source of ideas. Predictability, unpredictability, and duplications are attributes of these ideas. The proportion of new ideas and duplications in a subject at different periods partly affect the shape of the growth-curve for that subject. Wastage due to unintended duplication, partly arising from a deficient documentation service, is the concern of librarians and of those making policies for the organisation of research and development. These and various other social implications of scientific research are studied by specialists in different disciplines, grouped under the name 'science of science'. Data on the discovery and duplication of antibiotics are presented. Regression analysis, Analysis of Variance, and a Modified Poisson Distribution have been used to analyse the data and study the trend of duplication, the distribution of duplication, and the relationship between duplication and discovery. The findings are: 1) The total number of discoveries, new discoveries, and duplications are predictable by assuming a linear relationship between the respective pairs of variables; 2) The pattern of duplication is not due to chance alone; there is a regularity, in the statistical sense, in its behaviour; 3) The reported discoveries and duplications both increase with time; 4) The behaviour of the functional relationship between the number of duplications in relation to time, are different; 5) Over the thirty-year period 1937-66, the rate of duplication has nearly halved; and 6) There appears to be a tendency for the cumulative duplication to stabilise at about twenty-five percent of the cumulative discoveries over the sixty-year period 1907-66. Further work in the subject is mentioned.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Statistical and operations research techniques particularly useful for application in library work.

32 Limitations of these techniques in certain areas of library work.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Some of the techniques useful for application in library work are, Random sampling, Queuing, Dynamic programming, Linear programming, Opinion survey, Questionnaire and observation, and Analysis of Variance.

42 These techniques help in generalising and predicting the trend. But one should be careful in getting reliable data, and its analysis. Limitations are in recognising the various factors and situations, and in choosing the appropriate techniques.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition C1

1 Proposition C1 was moved by B S S Gupta.

2 B L Gupta seconded.

51 Amendment 1

Miss Rajni Ahuja, moved Amendment 1. It read as follows:

"Replace the word 'Calculus' by 'Methods'."

Supporting the amendment, Miss Ahuja said that the term 'Statistical Calculus' is not current and the term 'Statistical Method' is in vogue. Hence, the amendment.

Shri A H Kidwai seconded.

The house felt that this is only a verbal amendment and could be taken care of by the Secretariat.

52 Amendment 2

B S S Gupta moved, on behalf of Group H, Amendment 2. It read as follows:

"Replace the word 'Calculus' by 'Techniques'; delete the words 'measuring and planning', and replace the word 'suitably' by the word 'efficiently'."

Supporting the amendment, Gupta said that the term 'Statistical calculus' and 'Statistical method' are not descriptive of the role of statistician. It may better be replaced by the term 'Efficiently utilise' because 'suitably' may mean changing the techniques to suit the occasion.

B L Gupta seconded.

Since these are verbal amendments, the house requested the Secretariat to take care of them.

PROPOSITION D2.

1 STATEMENT OF PROPOSITION

The work standard for classification and cataloguing should be revised at suitable intervals of time. [Papers DB and EA].

2 PRESENTATION OF PAPERS

(See Sec 22 and 23 in Chap RA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Methods for predicting the trend in the classification and cataloguing features presented by books.

32 Is it helpful to study separately the trend in the complexity of the cataloguing features presented by books in the field of natural sciences and by those in the field of humanities and social sciences.

33 What are the other factors affecting classification and cataloguing time and methods of measuring each of them?

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Time series analysis and Regression analysis techniques are helpful in predicting the trend in the classification and cataloguing features presented by books.

42 A separate study of subjects embodied in books, falling within the areas of Natural sciences, Humanities, and Social sciences is helpful in knowing and predicting the respective classification and cataloguing features.

43 The intensity of subject and the problems presented by publishing industry in the title-pages and its overflow, or the capacity of the scheme for classification or catalogue code, the expertise in respect of classification and cataloguing of the person classifying or cataloguing, are some of the factors to be noted.

5 DISCUSSION IN PLENARY SESSION 2

50 Movement of Proposition D2

1 Proposition D2 was moved by H L Amga.

Supporting the proposition Amga said that the suggestions made in Papers DB and EA show that the specificity in terms of the intension of the subjects embodied in books is increasing. This affects the work standard for the classification and cataloguing of books.

2 P Jayarajan seconded.

51 Amendment 1

Krishan Kumar moved Amendment 1. It read as follows:

"At the end of the proposition add 'based on studies, on the complexities of the subjects thrown out on the wave-front of knowledge'."

Miss R A Nagarathna seconded.

Devadason, Girja Kumar, and Kashyap opposed the amendment saying that it is redundant.

The general consensus of the house was against the amendment.

52 Amendment 2

D B Eswara Reddy moved Amendment 2. It read as follows:

"Replace the term 'The work Standard' by 'The Standard Quantum of work' in the proposition."

V P Vij seconded.

The general consensus of the house was this was only a verbal amendment and could be taken care of by the Secretariat.

PROPOSITION E1.

1 STATEMENT OF PROPOSITION E1

The intension of subjects embodied in books is increasing with time and it calls for built-in-capacity in the schemes for library classification to accommodate this trend. [Paper EA]

2 PRESENTATION OF PAPER EA

(See Sec 23 in Chap RA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Methods of measuring the trend.

32 Methods of accommodating the trend in the development of the subjects in a scheme for classification.

4 GROUP DISCUSSION

There was general agreement among members of the groups on the following points:

41 There is need for examining the different methods of understanding of the trend in the subject-content of books from time to time.

42 The method, demonstrated in Paper EA, for measuring the trend in the subject-content of publications is helpful.

43 Exploring newer modes of formation of subjects and developing techniques for accomodating the new modes in the schemes for classification.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition E1

Proposition E1 was moved by P Jayarajan.

Prof A Neelameghan seconded.

There was no amendment.

DRTC Seminar (7)(1969). SB.

PROPOSITION E2.

1 STATEMENT OF PROPOSITION E2

There will be considerable economy if titles of articles in periodicals are made fully expressive of the subject of the article. [Paper EB].

2 PRESENTATION OF PAPER EB

(See Sec 24 in Chap RA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Need for formulation of guiding principles.

32 Need for cooperation between author, editor, and documentalist.

33 Mode and areas of cooperation.

4 GROUP DISCUSSION

There was general agreement among the members of groups on the following points:

41 Guidelines will be helpful for formulating fully experessive titles for articles in periodicals. The concept of facet analysis may aid this.

42 Steps are to be taken to bring a communion between author, editor, publisher, and documentalist.

43 Developing standards for rendering titles of articles would be helpful.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Provision E2

Proposition EB was moved, on behalf of S Seetharama by Prof A Neelameghan. He said that there could be considerable saving and efficiency in classification, cataloguing, reference service, and abstracting, if titles of articles in periodicals are made expressive. The fully expressive title has assumed great importance in these days of using the electronic gadgets.in document finding. This is illustrated in Paper EB by S Seetharama.

P Jayarajan seconded.

51 Amendment 1

V P Vij moved, on behalf of Group F, Amendment 1. It read as follows:

"Add the word 'Learned' in between the words 'in' and 'periodicals'."

Vij said that the term 'Learned' is introduced just to avoid the problem of titling articles in popular magazines and newspapers.

H C Revannasiddappa seconded.

The general consensus of the house was in favour of Amendment 1.

DRTC Seminar (7)(1969). TA.

PROPOSITION G1.

1 STATEMENT OF PROPOSITION G1

In the preparation of a documentation list, the reaction of its users should be studied periodically and the documentation list modified on the basis of the findings. [Papers GA to HB].

2 PRESENTATION OF PAPERS

(See Sec 27 to 293 in Chap RA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Factors on which information should be collected in the survey.

32 Methods of survey.

4 GROUP DISCUSSION

There was general agreement among the groups on the following points:

41 Some of the factors to be considered are:

411 Reader's subject-background;

412 His tastes for reading and ability for absorbing new ideas; and

413 The documents he reads casually and those seriously, etc.

42 Direct-contact and written questionnaire method may be employed with periodical reminders.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition G1

Proposition G1 was moved by B L Gupta.

S V Sangameswaran seconded.

Since there were no amendments the chairman allowed discussion on the Proposition itself.

Dr D B Krishna Rao said that surveys are not always properly conducted. Therefore, the results of a survey should be carefully examined before effecting modification in a documentation list.

S V Sangameswaran said that the reader's reactions may be sometimes unpalatable. But the documentalist should take care of this and modification made so that it satisfies readers.

Prof P N Kaula said that the consumer's reaction towards the techniques used such as classification and cataloguing, are to be noted for revision of the scheme for classification or code for cataloguing as the case may be.

Prof A Neelameghan (Chairman) said that the use of a good scheme for classification and a good cataloguing code in the preparation of a documentation list alone will not achieve the objective of documentation service. Steps should be taken to inform the readers of the utility and advantages of using the documentation list and how to use it. Personal experience shows that once a research worker discovers the helpfulness of using the documentation list, he is most likely to inform his co-workers about it and the use of the services of the library will increase.

PART U : MANAGEMENT OF TRANSLATION SERVICE

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UA	Proposition K1	749-52
UB	Proposition K2	753-4

DRTC Seminar (7)(1969). UA.

PROPOSITION K1.

1 STATEMENT OF PROPOSITION K1

A systematic survey of the translation needs of the country in every language-subject combination should be made using appropriate survey method, and on the basis of the findings, the UGC or any other appropriate central agency should organise part-time training courses for translation personnel, open to post-graduate students during their course. /Papers KA to KD/.

2 PRESENTATION OF PAPERS

21 Presentation of Paper KA

M V Ranganathan presented, on behalf of Dr S R Ranganathan, the salient points of Paper KA. He said:

There is a cultural need for the translation of the books of one linguistic group into other languages. Towards this, in the international plane Unesco has played a vital role in the promotion of translation of books. The Union Ministry of Education of India is promoting the translations of books into different Indian languages.

The growing need for the translation of micro documents could be traced to the beginning of the twentieth century.

Self-translation service is now being replaced by the triangle of Producer-Consumer-Promoter.

In the international plane, cover-to-cover translations have been promoted in anticipation of demand.

The difficulties posed by the ad hoc demand for translations may be effectively met by the establishment of a National Translation Centre.

This centre should also provide for special training for technical translators. However, this should be done by a new profession of translators -- technical translators -- and not by the documentalist.

22 Presentation of Paper KB

B D Baliga presented the salient points of Paper KB. He said;

The languages and the subject-fields in which translations are predominantly required at present and the likely trend in the requirement in the near future are factors to be tken into consideration in planning translation service.

The trend of research and developmental work in different subjects in the country and the fact of its being influenced by the work done in other countries are factors affecting the focus of attention in subject-fields and languages from time to time.

Some topics in mining and allied subjects are of immediate interest to India. Other subjects are likely to become important and focus of attention in the future.

A survey of such areas of interest gives some idea of the languages from which translation would be required at present and in the near future.

In the field of Mining, documents in the East European languages, French, and Japanese have relevance to the research and developmental work done in India.

23 Presentation of Papers KC and KD

Papers KC and KD were not presented as the authors were not present.

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Methods of collecting data.

32 Agency for sponsoring and financing surveys.

33 Contents of the course for translators.

34 Duration of the course.

35 Practicablity of the suggested survey.

4 GROUP DISCUSSION

There was general agreement among the members of the groups on the following points:

41 Questionnaire method and interview with the technical and industrial organisations are to be made to assess their respective translation needs.

42 The suggested survey should be a realistic and well planned one.

43 Either CSIR or UGC or any other national body should finance and sponsor such surveys.

44 The course should lay adequate emphasis on translation technique, the quality of good translation, etc rather than teaching languages.

45 Duration of the Course may be one academic year.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition K1

Proposition K1 was moved by B D Bāiga.

B S Ramananda seconded.

51 Amendment

R P Wasan, on behalf of Group F, moved Amendment 1. It read as follows:

"Delete the words 'Part-time' and 'open to postgraduate students during their course' from the proposition."

Wasan said that this amendment sought to remove the restrictions imposed in the original proposition. The details about the admission, whether it is full or part time, should be left for decision in the context.

D B Eswara Reddy seconded.

Opposing the amendment B L Gupta, T N Rajan, V P Vij, V S Padmanabhan and B D Baliga said that the spirit of the original proposition is to say that in the present context there is no sufficient scope for full-time translation training courses. But, to meet the ad hoc needs of translation, it is helpful to have part-time courses open to postgraduates.

Satyanarayana, B S Ramananda, and D Ch Raja Rao supported the amendment.

The general consensus of the house was in favour of the amendment.

DRTC Seminar (7)(1969). UB.

PROPOSITION K2.

1 STATEMENT OF PROPOSITION K2

There should be a National Translation Centre for co-ordinating the translation facility in the country [Papers KA to KD].

2 PRESENTATION OF PAPERS

(See Sec 21 to 24 in Chap UA)

3 ISSUES DISCUSSED IN GROUP MEETINGS

31 Functions of the National Translation Centre.

32 Steps to be taken to organise a National Translation Centre.

33 International cooperation in this matter.

4 GROUP DISCUSSION

There was general agreement among the members of groups on the following points:

41 The National Translation Centre should act as a Central Coordinating Agency. It should, from time to time, act as a feeder line between the centre needing translation and the centre where translation could be done.

42 The Ministry of Education of the Government of India may be persuaded to establish a National Translation Centre.

43 To facilitate national and international co-operation, a list of translations done in the country should be prepared and published periodically.

5 DISCUSSION IN PLENARY SESSION

50 Moving of Proposition K2

Proposition K2 was moved by Prof A Neelameghan.

M A Gopinath seconded.

There was general agreement on the need for a National Translation Centre in India. The proposition was accepted without any amendment.

PART V : NEW PROPOSITIONS AND SUGGESTIONS FOR FURTHER WORK

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VB	Suggestions for Further Work arising out of Group Discussions. ..	758-60

DRTC Seminar (7)(1969). VA.

NEW PROPOSITIONS ARISING OUT OF GROUP DISCUSSIONS.

1 PAPER BB

In a Complex Subject, presenting any Phase Relation, it is helpful to leave it to the discretion of the classifier to have any one of the subjects as the subject of Phase 1, subject of Phase 2, and so on. (Group D).

2 PAPERS GA TO HB

An Individualised Documentation Service at the optimum level of specialisation is more helpful than a Generalised Documentation Service. (Groups C and H).

3 PAPERS KA TO KD

A Central Institute for Foreign Languages may be established under the auspices of the Government of India, with special emphasis for training translators in science and technology. (Groups A, B and C).

DRTC Seminar (7)(1969). VB.

SUGGESTIONS FOR FURTHER WORK ARISING OUT OF GROUP DISCUSSIONS.

1 PAPER AA

It would be useful to test the validity of the theories about the modes of formation of subjects suggested by Boulding, Tromp and others, by taking up specific projects. (Group A).

2 PAPER AB

In the Host Main Subject Public Health, characteristics, such as environment, age, and sex may be used for the formation of Special Basic Subjects. The problems should be reviewed when a detailed schedule on Public Health is worked out. (Group F).

3 PAPER AC

The classification of the variant of a system of psychology should be examined in order to bring them together with the 'parent' system. (Group C).

4 PAPER AD

41 Further studies should be made to find out the incidence of the deductive process in the Spiral of Scientific Method. (Group B).

42 Investigation should be made in detail to deem Physical Education as a science or not, according to the Spiral of Scientific Method. (Group H).

5 PAPER BB

51 Further studies should be made in regard to other kinds of Phase Relation, such as "Application" and

"Influence". (Group B).

52 In order to arrange all kinds of Phase Relation of two different Compound or Basic Subjects in one continuous sequence, work should be done in the Notational Plane to implement the findings of the Idea Plane. (Groups F and H).

53 A project should be taken up to develop a set of criteria for deeming a subject as a Fused Main Subject. (Group G).

54 The validity of Proposition B1 can only be substantiated if it proves to be efficacious when tested over a large population of documents dealing with diverse subjects brought together in various phases. If necessary, the active cooperation of the participants for conducting the studies in their respective organisations can be sought. (Group A).

6 PAPER BC

61 Extensive schedules for Energy Isolates and Property Isolates should be built up. (Group F).

62 A detailed study should be made regarding the qualifiers to Energy Isolates. (Group H).

63 A set of criteria should be evolved to distinguish an Energy Isolate from a Property Isolate. (Group F).

7 PAPER BD

71 In order to test the validity of Proposition B3, further investigations may be done taking assorted examples from Compound Subjects going with each of the different Basic Subjects. (Group E).

8 PAPERS CA AND CB

Further studies should be made in the cyclic rendering of Cross Reference Index Entries for a dictionary catalogue. (Group H).

91 PAPER EB

911 A set of guiding principles should be formulated by documentalists for constructing expressive titles of articles in periodicals for the consideration of Authors and Editors. Guiding principles may be drafted by the Indian Standards Institution. (Group G).

912 An International Seminar of Authors, Editors, Publishers, and Documentalists be convened to consider ways and means of achieving the objective mentioned in the Proposition E2. (Group B).

92 PAPERS IN PARTS D TO J

921 It would be useful to include courses in Statistical Calculus and Operations Research in the Syllabus for advanced training in Library Science and Documentation. (Group C).

922 Utilisation of Statistical Calculus and Operations Research in library work could be done better in consultation with Specialists in Statistics and Operations Research. (Group F).

93 PAPERS KA TO KD

The experience gained by INSDOC in respect of setting up of a National Translation Centre should be taken into account. (Group F).

PART W : CONCLUDING SESSION

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WB	Vote of Thanks	769-74

DRTC Seminar (7)(1969). WA.

VALEDICTORY ADDRESS.

S R RANGANATHAN, Director of the Seminar.

Colleagues in the Profession:

1 NEED FOR FREQUENT RE-EXAMINATION OF LIBRARY PRACTICES

I am glad that you have completed your task after strenuous work throughout the week. I congratulate you on the devotion with which you discussed the subjects in the group meetings and finalised the findings in the Plenary Sessions. The proposals approved by the Plenary Sessions confirm some of the existing practices on the basis of the experience of the participants. But do not forget that you will have to re-examine them from year to year, as violent changes are taking place, both in the Universe of Subjects and in the needs of research workers.

2 NEED FOR FOLLOW-UP OF THE NEW SUGGESTION BY EXPERIMENT AND STUDY AND FOR REPORTING THE RESULT

There are also suggestions made for the investigation of new problems. I trust that the persons and the groups who thought of these suggestions will make the necessary experiments and work out a paper for presentation at an early annual conference. I trust that the DRTC will cooperate with such persons and groups.

3 THE AVERAGE AGE OF THE PARTICIPANTS BEING LOW IS A GOOD AUGURY

During the last seven years I have been observing that the average age of the participants has been slowly going down. This year, the mean as well as the median age has reached 35. This is a good augury for the future of India. One naturally expects new ideas and vigorous investigation of such ideas to emanate from the younger generation. Though the wisdom of older generation may be of help, the older generation develops rigidity in its intellectual work and feels overwhelmed by its addiction to old practices and traditions. This is a phenomenon that cannot be overlooked. That is why I have been feeling happy that the younger generation is taking an active part in our work.

4 FREQUENCY TABLE OF THE AGE-GROUP OF PARTICIPANTS

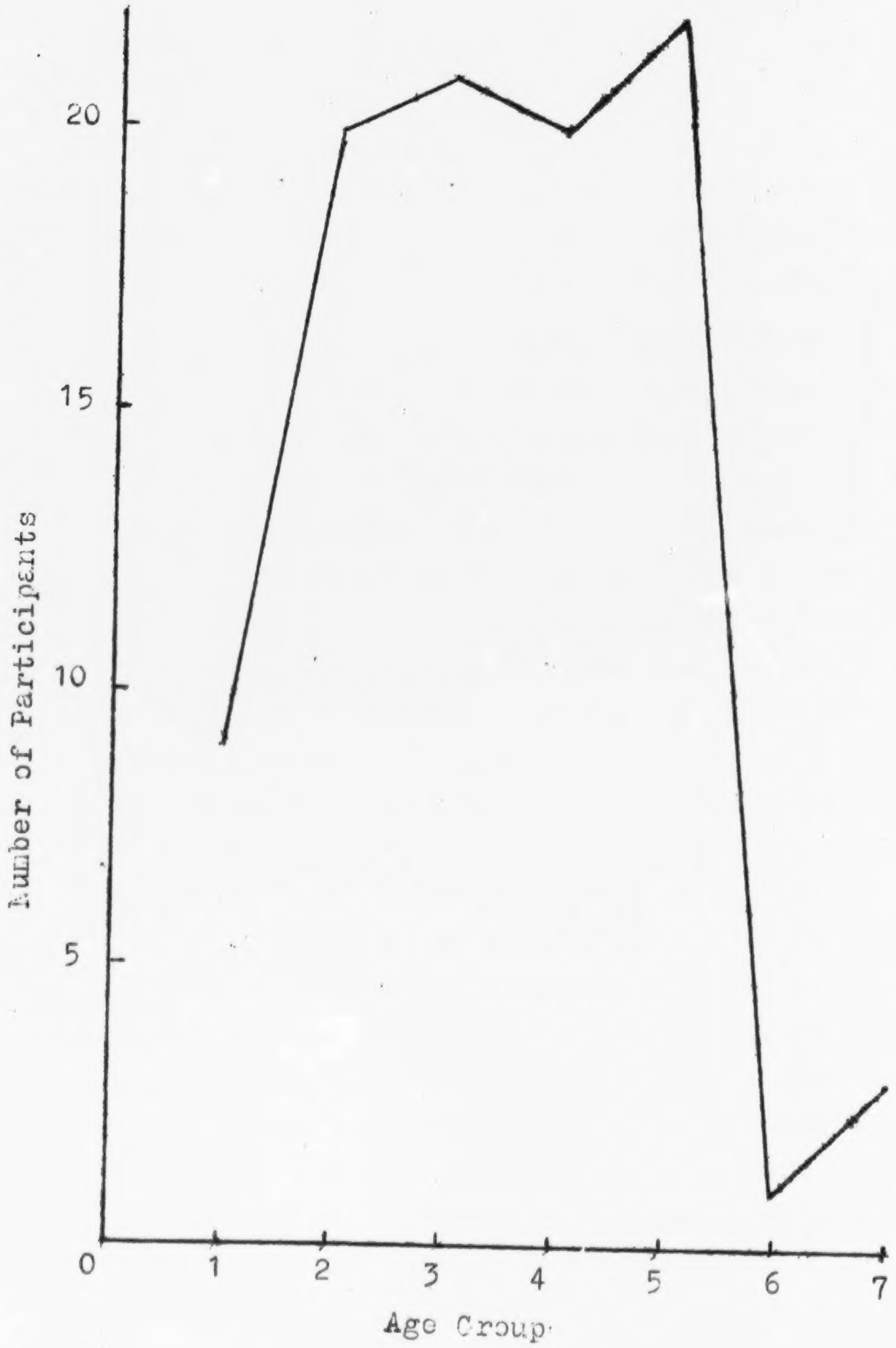
A frequency table of the age-group is as follows:

SN	Age-Group	N of Delegates	Percentage
1	20-25	9	9.0
2	25-30	20	20.9
3	30-35	21	21.9
4	35-40	20	20.9
5	40-45	22	22.9
6	45-50	1	1.03
7	50-55	3	3.06

5 FREQUENCY CURVE OF THE AGE OF PARTICIPANTS

The above data are presented in the form of a frequency curve (next page). This curve requires detailed study and interpretation. My own general interpretation is that it indicates a healthy trend in the development of our profession.

51 Frequency Curve



6 WORK OF THE DOCUMENTALIST

I should like to conclude this short valedictory address with a few statements:

1 Kindly accept my apologies for my inability to be present amidst you during the seminar and enjoy the performance of the young librarians. However, my mind has been always with the seminar and I was getting frequent reports about what was happening from time to time.

2 I should like to appeal to you to take library profession seriously. It is of considerable social value. In the Pre-Gandhian India, our people did not realise the value of library service even to the generalist reader. But the renaissancethat has come in the present Gandhian period is producing in our younger generation an assessment of the value of library service, not only to generalist readers in public libraries and academic libraries but even more so of the importance of library service -- called "Documentation Service", to emphasise it -- to our Government Departments, research workers, and particularly each one of our industries. Our industries will not be able to cope with the development of industries in the other parts of the world unless it is continuously improving its designs and know-hows. In developing these, the time of the research worker should be saved from having to waste a large amount of time in wading through a large number of periodicals containing nascent ideas, in order to fish out what is relevant to his own work. The library profession should, therefore, become a partner in research work. It should acquire collectively, in India as a whole, as large a number of learned periodicals as possible, scan them, be in touch with the work in

progress in the different parts of the country, pick out the articles bearing on them, produce a classified documentation list of them and serve them to all research workers.

3 This documentation service will have to be done both in anticipation and on demand. The work on anticipation can be done in two levels -- one at the national level, covering all the research work in progress in the country and the second at the local level by the library of each research organisation, correctly oriented to the actual needs of the workers in the organisation. The documentation list on demand should be prepared promptly and served to the research worker demanding the same. This can be done best only if the anticipatory documentation list is made and kept cumulated with equal promptness. No doubt the international abstracting periodicals will be of help in the case of older materials, but it is the current materials that are of the greatest importance to the research workers. This demand cannot be met by international abstracting periodicals. That is the reason why we should have national and local documentation work done, covering just the work in progress in the country.

4 Making a documentation list is necessary, but it is not sufficient. The documentalist in each research organisation should keep in close touch with each research worker in his organisation, both officially and unofficially, find out in a friendly way what he is working on and adapt his documentation work accordingly.

5 Again, when a research worker comes with a specific request, it is essential that a trilogue should be started between the documentalist, the research worker, and the cumulated documentation

list; and the research worker should be helped to formulate as close an approximation as possible to his own requirement at the moment by the very method of Facet Analysis of the question, as is used in classifying a document. Once this is done, the research worker will be helped to scan only through a very small pack of catalogue cards. While scanning, he will be able to recognise immediately what exactly he wanted but was unable to express in precise terms.

I trust, my friends, that you will make this your life-work from day-to-day.

7 THANKS TO THE PARTICIPANTS

Finally, I want to take leave of you, thanking you and your predecessors in the last seven years for all the kindness shown to me by the members of the Seminar. This will be the last year when I shall be the Director of the Seminar. I wish to withdraw from this position for two reasons: one is my physical debility, and the other is my firm belief that no old man should always hang on to a post denying opportunity for the younger people to occupy such a post and gain experience and leadership.

8 THANKS TO MR LANGRIDGE

Though not strictly connected with the Seminar, I wish to take this opportunity to express the thanks of my wife and myself for the kindness of Mr Langridge to have come all the way from London to deliver the Sarada Ranganathan Endowment Lectures this year, in spite of his not being quite well.

DRTC Seminar (7)(1969). WB.

VOTE OF THANKS.

1 ON BEHALF OF THE DRTC

By Prof A Neelameghan

Ladies and Gentlemen:

One of the usual items of the concluding session of our Seminar is to have your suggestions about Subjects for discussion at the next seminar. We have already gone through this item earlier and taken note of the subjects suggested by the delegates.

Our Seminar dates, as you know, have been fixed to be 15 to 19 December each year. This has been done advisedly so that the dates of other Seminars can be spaced out conveniently. Some of you have suggested that the seminar be held in the first week of November. There have also been suggestions regarding the duration of the seminar and the hours of break between the plenary sessions and the group meetings. It has been suggested that each day the seminar sessions close earlier than what it has been so far and that the Endowment Lectures be completed by about 5.30 in the evening, so that the delegates may find some time to attend to their own private business. We in DRTC shall think about these suggestions and try to draw up the programme suitably, keeping also in view the convenience of the local people who attend the Endowment Lectures.

However, I would like to remind you that if we have to prepone the dates of the seminar, the dates for DRTC indicating acceptance and for submission of the completed papers etc will also have to be preponed. By February, the draft of the outline of the proposed papers will have to be sent to us and the full papers should reach us by July. The delegates may kindly note these points, if they prefer to have the seminar in November. The authors are requested to bear in mind that we have to do a lot of editing and sometimes change a great deal the presentation in a paper to make it fit into the area of subjects for discussion. The work of editing and bringing out the pre-conference papers will become easier if the authors cooperate with us in these matters.

My next pleasant task is to thank all the delegates of this year, who have so well cooperated with us in the conduct of the seminar. Without your cooperation, it is difficult to run a seminar in the way we have been able to do. Special thanks are due to Dr Ranganathan, although he could not be present here physically. In spite of this, his mind was all the time in the seminar , and he has been getting information as to what was going on here.

Our thanks are due to the authors who contributed papers to this seminar. We are also grateful to the Chairmen of the different sessions and to the leaders and rapporteurs of the group meetings who have done a very good job. It is possible for us to produce the Proceedings of the seminar mainly because of what the leaders and rapporteurs do.

Apart from the participants, we have a few distinguished guests who were able to be present for sometime at least and have given us the benefit of their experience.

Our thanks are also due to the Mysore Library Association who got up an "At Home" for the delegates. I thank you for having accepted the invitation of the Association.

On behalf of the DRTC, I thank Mr D W Langridge for having accepted our invitation as a Visiting Professor for one week. Our thanks are also due to the British Council who made it possible for him to come to our country.

Finally, you will all appreciate the nice work done by the DRTC Secretariat staff and our thanks are due to them. They started the work of mimeographing the papers much earlier than the seminar dates, such that the little bulky volume that you have, could reach you at least three weeks before the seminar dates, to enable you to come prepared for the seminar. It was only on account of their continuous work, this was possible.

Lastly, but not the least, our thanks are to the DRTC hostel staff who served you lunch and refreshment during these four days.

Thank you all.

2 ON BEHALF OF THE PARTICIPANTS

By Dr D B Krishna Rao

Beloved Professor Ranganathan in absentia, Prof Neelameghan, and Delegates:

On behalf of the delegates collected here from different parts of the country and on my own behalf, I have great pleasure in expressing our thanks to the Director of the Seminar for organising the seminar on such excellent lines and who has been the guiding spirit and to Prof Neelameghan and Mr Gopinath for the hard work they hav put in, to make the seminar a great success. Our thanks are also due to Mr Langridge for having come here all the way from London and given three lectures under the auspices of the Sarada Ranganathan Endowment for Library Science. We look forward to reading the other lectures in print.

We thank the DRTC for the excellent hospitality arrangements made during the period of the seminar.

Our thanks are due to all the delegates who have taken the trouble to be here to present their papers and participate in the delebration.

Lastly, we have great pleasure in thanking every one for the excellent way in which they have participated.

I dare say that the seminar conducted by DRTC is on such excellent lines, that we have not come across another of its kind. I also doubt whether any other country conducts a seminar on such disciplined lines.

Once again, I have great pleasure in conveying our thanks to Prof Ranganathan and Prof Neelameghan.

3 ON BEHALF OF THE DRTC ALUMNI

By M V Ranga Rau

I am here to propose a vote of thanks on behalf of the alumni of the DRTC.

We have once again come to the end of another very stimulating seminar. We have had a brilliant series of lectures by a very eminent exponent on Teaching of Library Classification. We have had a memorable assemble of distinguished delegates from all parts of the country. We have such distinguished guests in our midst as Dr D B Krishna Rao, P N Kaula, T N Rajan, Guha, Vij and other specialists in the field, who had not been seen before in such great numbers. This shows the very great attraction that the DRTC seminar is drawing gradually from year to year, as a source for re-education.

We very much missed the physical presence of our beloved Professor Ranganathan, whose aroma of intellectual and spiritual presence were all pervasive and inductive. Our thanks are due to Prof Neelameghan and his very live-wire colleagues for the excellent organisation and implementation of a well-planned seminar in the true tradition of DRTC.

We are so much enthused to find that in each succeeding generation of the DRTC alumni, the calibre of the students is reaching a higher degree, from what we saw from the present batch of students who participated in the discussions with us.

On behalf of the DRTC alumni, I have privilege of conveying our best wishes for many more years of great health and brilliant ideas to our beloved Professor and Guide, Dr Ranganathan.

Our thanks are also due to Prof Neelameghan and Shri Gopinath and all our friends in the administration and executive side of the DRTC, who made our stay here a memorable and pleasant one which we cherish for years to come!

I am sure we should not forget the hospitality that was extended to us by the Mysore Library Association yesterday evening. Our thanks are also due to them. We hope that the hospitality will continue.

To the present batch of DRTC students, I would say that we were very jealous of them in the sense that we were not able to achieve what they did. Our thanks are also due to the Sarada Ranganathan Endowment for Library Science and the British Council for having made it possible for us to benefit from the powerful series of lectures by top authorities at the international level. Our enthusiasm has been kept at a high level once again with the announcement of Dr Pauline Atherton's visit next year.

Thank you very much.

4 ON BEHALF OF DRTC STUDENTS

By M P Sinha

Dr Ranganathan in absentia, Prof Neelameghan, and Distinguished Delegates:

On behalf of the present batch of students of the DRTC it is my privilege to express my hearty vote of thanks. As a result of our discussion with you in the group meetings, we have gained good experience. This is the first time that we the students of the DRTC contributed papers both individually and collectively. This would not have been possible but for the guidance and cooperation of Prof Neelameghan. On behalf of the present batch of DRTC students I extend to you all a hearty vote of thanks.

PART X : END MATTER

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OFFICE-BEARERS AND GROUPS.

Director	Dr S R Ranganathan, National Research Professor in Library Science, and Honorary Professor, DRTC.
Rapporteur-General	M A Gopinath, Lecturer, DRTC.
Convener	A Neelameghan, Professor, DRTC.

CHAIRMEN OF PLENARY SESSIONS

Name	Date	Hours
A Neelameghan	15 Dec 1969	11.00 to 12.30
	18 Dec 1969	9.00 to 10.30 and 11.00 to 12.30
	19 Dec 1969	9.00 to 10.30
B Guha	16 Dec 1969	9.00 to 10.30
Dr D B Krishna Rao	16 Dec 1969	11.00 to 12.30
Girja Kumar	17 Dec 1969	9.00 to 10.30
P N Kaula	17 Dec 1969	11.00 to 12.30

RAPPORTEURS FOR PLENARY SESSIONS

- Ahuja (R)(Miss)
- Amga (H L)
- Devadason (F J)
- Revannasiddappa (H C)
- Sinha (M P)

LEADERS FOR GROUP MEETINGS

- Baliga (B D)
- Bhargava (G D)
- Girja Kumar
- Gopinath (M A)
- Gopinath (M V)
- Guha (B)

Gupta (B L)
Iyengar (T K S)
Jacob Thomas (T)
Jogdeo (R G)
Kashyap (M M)
Kaula (P N)
Kidwai (A H)
Krishna Rao (D B)(Dr)
Nagarathna (R A)(Miss)
Padmanabhan (V S)(Dr)
Rajan (T N)
Rajannan (B)
Raja Rao (D Ch)
Ramananda (B S)
Ranganathan (T)
Ranga Rau (M V)
Sampath (H K)
Seetharaman (M N)
Shah (P C)
Srinivasan (V)
Subramanian (P V S)
Vij (V P)
Wasan (R P)

RAPPORTEURS FOR GROUP MEETINGS

Ahuja (R)(Miss)
Chandrashekara Sastri (K)
Devadason (F J)
Gundu Rao (D)
Raghavendra Rao (G S)
Revannasiddappa (H C)
Sangameswaran (S V)
Semwal (G P)
Sinha (M P)

MEMBERS OF GROUPS

Group A

Ahsan (A S)
Devadason (F J)
Gupta (S B)
Iyengar (T K S)
Jayasheelan (R)
Krishna Kumar
Mohanraj (P A)
Nagarathna (R A)(Miss)
Pandya (J F)
Patil (M B)
Pratapalingam (P)
Radha Iyengar (Miss)
Ranga Rau (M V)

Group B

Ahuja (R)(Miss)
Buche (V V)
Govindaswamy (R)
Hoskote (V N)(Miss)
Khasnis (R N)
Kidwai (A H)
Murthy (N N K)
Ramananda (B S)
Semwal (G P)
Shaheed (K F)(Miss)
Shah (P C)
Subramanian (P V S)
Krishnan (A)

Group C

Connie Farrow (Miss)
Geel (R K)
Gopalakrishnan (N K)
Guha (B)
Hemamalini (B S)(Miss)
Jogdeo (R G)
Johnson (I Y)(Mrs)
Krishna Rao (D B)
Malhotra (V K)(Miss)
Raghavendra Rao (G S)
Seetharaman (M N)
Subhashini (K)(Mrs)
Ved Prakash

Group D

Afroze Fatima (Mrs)
Anand (S R)
Bimla Nanda (Mrs)
Chitale (S A)(Miss)
Ghosh (A K)
Gundu Rao (D)
Jain (H C)
Kashyap (M M)
Nadgir (G B)(Miss)
Padmanabhan (V S)
Sampath (H K)
Shewde (D W)
Sikri (A L)
Tripathi (G S)

Group E

Anga (H L)
Bankapur (M B)
Girja Kumar
Gopinath (M A)
Gopinath (M V)
Izzat Jehan Begum (Miss)
Langridge (D W)
Mehendale (A R)
Parthasarathy (V V)
Ranganathan (M V)
Sangameswaran (S V)
Satyanarayana (S)
Srinivasan (V)

Group F

Bharucha (R R)(Mrs)
Eswara Reddy (D B)
Jayarajan (P)
Pavitran (M K)
Raja Rao (D Ch)
Rajan (T N)
Revannasiddappa (H C)
Saini (M L)
Srinivastava (M S)
Subba Rao (K)
Suseela Kumar (Mrs)
Tyagi (M S)
Vij (V P)
Wasan (R P)

Group G

Chandrasekhara Sastri (K)
Jacob Thomas (T)
Kaula (P N)
Krishnamurthy (R)
Pandurangam (S)
Parimala Rao (R N)(Miss)
Rajannan (B)
Ranganathan (T)
Shukla (D N)
Sree Ranga (T)
Sudha S Murthy (Mrs)
Syed Mohsin Taqi
Venkataramanaiah (T V)

Group H

Baliga (B D)
Bhargava (G D)
Gupta (B L)
Gupta (B S S)
Mohan Roy (R P)
Raghavendra (S R)
Samba Murthy (N)
Sangannavar (I C)
Sanjeeva Rao (P J)
Sastry (K B C)
Sinha (M P)
Sugra Begum (R)(Miss)
Nagarajan (K S)
Vireswara Rao (K S)

DRTC Seminar (7)(1969). XB.

LIST OF DELEGATES.

1 AFROZE FATHIMA (Mrs). Librarian, Hindustan Machine Tools Ltd, Bangalore 31.

2 AHSAN (Abu Shoaib). Librarian, Indian Agricultural Research Institute, New Delhi 12.

3 AHUJA (Rajni)(Miss). Trainee, DRTC Course (1969-70). Librarian, MGM Medical College, Jamshedpur.

4 AMGA (H L). Trainee, DRTC Course (1969-70). House No 1219, Bhagatsingh Marg, Mhow Post. (MP).

5 ANAND (S R). Librarian, Central Machine Tools Institute, Bangalore 22.

6 BALIGA (B D). Scientist, Central Mining Research Station, Dhanbad.

7 BANKAPUR (M B). Librarian, Institute of Horticultural Research, Bangalore 6.

8 BHARUCHA (R R)(Mrs). Librarian, Physical Research Laboratory, Navarangpura, Ahmedabad 9.

9 BIMLA NANDA (Mrs). Assistant Librarian, Delhi University Library, Delhi 7.

10 BUCHE (V V). Technical Officer, SQC Unit, Indian Statistical Institute, 4 Richmond Road, Bangalore 25.

11 CHANDRASEKHARA SASTRY (K). Librarian, National Dairy Research Institute, Bangalore 30.

12 CHITALE (S A)(Miss)(Dr). Director, National Medical Library, DGHS, Temple Lane, New Delhi.

13 CONNIE FARROW (Miss). M L S student, University of California, USA.

14 DEVADASON (F J). Student, DRTC Course (1969-70). S/o Rev. Y G Devadason, Koodan Kulam, Radapuram Taluk, Tirunelvelly District, Tamil Nadu.

15 ESWARA REDDY (D B). Assistant Librarian, Bangalore University Library, Bangalore 1.

16 GHOSH(Ashit Kumar). Documentation Officer, Department of International Relations, Jadavpur University, Calcutta 32.

17 GIRJA KUMAR. Librarian, Indian School of International Studies, Sapru House, Barakhamba Road, New Delhi 1.

18 GOEL (R K). Central Building Research Institute, Roorkee.

19 GOPALAKRISHNAN (N K). Technical Assistant (Library), Indian Institute of Technology, Madras 36.

20 GOPINATH (M A). Lecturer, DRTC, Bangalore 3.

21 GOPINATH (M V). Librarian, Defence Food Research Laboratory, Mysore 1.

22 GOVINDASWAMY (R). Librarian, British Council Library, St Mark's Road, Bangalore 1.

23 GUHA (B). Scientist, INSDOC, New Delhi 12.

24 GUNDU RAO (D). Librarian, Bharat Electronics Limited, Bangalore 13.

25 GUPTA (B L). Librarian, Indian Institute of Packaging, Dr AB Road, Prabhadevi, Bombay 25 DD.

26 GUPTA (B S S). Programmer, DRTC, Bangalore 3.

27 GUPTA (S B). Assistant Librarian, Delhi University Library, Delhi 7.

28 HEMAMALINI (B S)(Miss). Library Assistant, Institute of Horticulture Research, Bangalore 6.

29 IYENGAR (T K S)(Dr). Librarian, Indian Institute of Science, Bangalore 12.

30 IZZATH JEHAN BEGUM (Miss). Librarian, Indian Plywood Industries Research Association, Bangalore 22.

31 JACOB THOMAS (T). Technical Supervisor, Research and Development Establishment (Engrs), Poona 15.

32 JAIN (H C). Assistant Librarian, Delhi University Library, Delhi 7.

33 JAYARAMAN (P). Research Assistant to National Research Professor in Library Science, DRTC, Bangalore 3.

34 JEYASEELAN (R). Technical Assistant, Madurai University Library, Madurai 2.

35 JOGDEO (R G). Assistant Librarian, Marathwada University, Aurangabad.

36 JOHNSON (Irma Y)(Mrs). Library Advisor, Kanpur Indo-American Project, Indian Institute of Technology Library, Kanpur.

37 KASHYAP (M M). Department of Library Science, Delhi University, Delhi 7.

38 KAULA (P N). Professor of Library Science, Banaras Hindu University, Varanasi 5.

39 KHASNIS (R N). Assistant Librarian, Bangalore University, Bangalore 1.

40 KIDWAI (A H). Lecturer in Library Science, Aligarh Muslim University, Aligarh.

41 KRISHNA KUMAR. Lecturer in Library Science, University of Delhi, Delhi 7.

42 KRISHNAMURTHY (R). Assistant Librarian, Gas Turbine Research Establishment, Bangalore 17.

43 KRISHNAN (A). Scientist, Insdoc, New Delhi 12.

44 KRISHNARAO (D B)(Dr). Professor and Head, Department of Library Science, University of Madras, Madras 5.

45 LANGRIDGE (D W). Principal Lecturer, School of Library Science, North-Western Polytechnic, London.

46 MALHOTRA (V K)(Miss). Research Scholar, University of Delhi, Delhi 7.

47 MEHENDALE (A R). Librarian, Sir Parashurambhau College, Poona 30.

48 MOHANRAJ (P A). Lecturer, Department of Library Science, University of Madras, Madras 5.

49 MURTHY (N N K). Foreman, Technical Information Centre, LRDE, High Grounds, Bangalore 1.

50 NADGIR (G B)(Miss). Assistant Librarian, Indian Institute of Science, Bangalore 12.

51 NAGARAJAN (K S). Officer-in-Charge, Insdoc Regional Centre, Bangalore 12.

52 NAGARATHNA (R A)(Miss). Chargeman, Technical Information Centre, LRDE, High Grounds, Bangalore 1.

53 PADMANABHAN (V S)(Dr). Scientist, TIC, Central Leather Research Institute, Adyar, Madras 20.

54 PANDURANGAM (S). Librarian, Geological Survey of India, Hyderabad.

55 PANDYA (J F). Reference Librarian, Indian Institute of Management, Vastrapur, Ahmedabad 6.

56 PARIMALA RAO (R N)(Miss). Bangalore University Library, Bangalore 1.

57 PARTHASARATHY (V V). Marketing Manager, Vulcan-Laval (India) Ltd, Bombay 1.

58 PATIL (M B). Senior Scientific Assistant, Institute of Armament Technology, Poona 25.

59 PAUL MOHAN ROY. Technical Assistant, Madurai University Library, Madurai 2.

60 PAVITRAN (M K). Librarian, Hindustan Machine Tools Ltd, Kalamassery, Kerala.

61 PRATAPALINGAM (P). Librarian, Hindustan Machine Tools Ltd, Balanagar, Hyderabad 37.

62 RADHA IYENGAR (MISS). Student of Library Science Course, Polytechnic for Women, Bangalore.

63 RAGHAVENDRA (S R). Librarian, CARS (ICAR), South Canara.

64 RAGHAVENDRA RAO (G S). Assistant Librarian, Indian Institute of Science, Bangalore 12.

65 RAJANNAN (Busnagi). Librarian, American Studies Research Centre, Hyderabad 7.

66 RAJA RAO (D Ch). Librarian, Central Tobacco Research Institute, Rajamundry 1.

67 RAJAN (T N). Officer-in-Charge, Training Course in Documentation and Reprography, Insdoc, New Delhi 12.

68 RAMANANDA (B S). Documentation Officer, Hindustan Machine Tools Ltd, Bangalore 31.

69 RANGANATHAN (M V). Translation Department, Hindustan Machine Tools Ltd, Bangalore 31.

70 RANGANATHAN (T). Senior Scientific Assistant, National Aeronautical Laboratory, Bangalore 17.

71 RAU (M V R). Scientist (Information), Central Leather Research Institute, Madras 20.

72 REVANNASIDDAPPA (H C). Trainee, DRTC Course (1969-70). S/o Chikkarevanna, Herur Post, Kunigal Taluk, Tumkur District.

73 SAINI (M L). Librarian, Institute of Post-Graduate (Evening) Studies, University of Delhi, Delhi 7.

74 SAMBAMURTHY (N). Library Assistant, University of Agricultural Sciences, Bangalore 24.

75 SAMPATH (H K). Assistant Librarian, Indian Institute of Science, Bangalore 12.

76 SANGAMESWARAN (S V). Scientist (Library), Central Food Technological Research Institute, Mysore 2A.

77 SANGANNAVAR (I C). Lecturer, Government Library Training School, Bangalore 20. (C/o State Central Library, Bangalore 1).

78 SANJEEVARAO (P J). Librarian, Power Research Institute, Bangalore 12.

79 SASTRY (K B C). Librarian, Central Library, Hindustan Aeronautics Ltd, Bangalore 17.

80 SATYANARAYANA (S). SSA, Directorate of Medical Sciences, Defence R&D Organisation HQ, New Delhi 11.

81 SEETHARAMAN (M N). Scientist-in-Charge, Library, National Aeronautical Laboratory, Bangalore 17.

82 SEMWAL (G P). Librarian, Defence Laboratory, Tatanada Palace, Jodhpur.

83 SHAH (P C). Librarian, Ahmedabad Textile Industries Research Association, Ahmedabad-9.

84 SHAHEED (K F)(Miss). Professional Assistant, Delhi University Library, Delhi 7.

85 SHUKLA (D N). Assistant Librarian, Gujarat University Library, Ahmedabad 9.

86 SIKRI (A L). Professional Assistant, Delhi University Library, Delhi 7.

87 SINHA (M P). Trainee, DRTC Course (1969-70). Jadavpur University Library, Calcutta 32.

88 SREE RANGA (T). Foreman, Head of Technical Information Centre, Chief Inspectorate of Electronics, Bangalore 6.

89 SRINIVASAN (V). Assistant Librarian, Indian Institute of Science, Bangalore 12.

90 SUBBA RAO (K). Documentation Division, Hindustan Aeronautics Ltd, Hyderabad 37.

91 SUBHASHINI (K)(Mrs). Librarian, SIET Institute, Yousufguda, Hyderabad 38.

92 SUBRAMANIAN (P V S). Scientist, Central Electrochemical Research Institute, Karaikudi 3.

93 SUDHA S MURTHY (Mrs). Librarian, National Tuberculosis Institute, 8 Bellary Road, Bangalore 3.

94 SUGRA BEGUM (R)(Miss). Lecturer, Polytechnic for Women, Bangalore 1.

95 SUSEELA KUMAR (Mrs). Librarian, The British Council, 150-A Mount Road, Madras 2.

96 SYED MOHSIN TAQI. Librarian, Hindustan Aeronautics Limited, Balanagar Township, Hyderabad 37.

97 TRIPATHI (G S). Assistant Librarian, Indian Institute of Technology, Kanpur.

98 TYAGI (M S). Librarian, Shivaji College, University of Delhi, New Delhi.

99 VED PRAKASH. Librarian State Institute of Education, Kingsway Camp, New Delhi.

100 VENKATARAMANIAH (T V). Assistant Librarian, Bangalore University Library, Bangalore 1.

101 VIJ (Ved P). Deputy Director (Library), Indian Standards Institution, New Delhi.

102 VIRESWARA RAO (K S). Librarian, Central Training Institute for Instructors, Guindy, Madras 32.

103 WASAN (RP). Librarian, Institute for Defence Studies and Analyses, Sapru House, Barakhamba Road, New Delhi 1.

104 RANGANATHAN (S R). National Research Professor in Library Science and Honorary Professor, DRTC, Bangalore 3.

105 NEELAMEGHAN (A). Professor, DRTC, Bangalore 3.

DRTC Seminar (7)(1969). XC.

TIME TABLE.

Date	Time	Particulars
Dec 1969		
15	08.15 - 09.15	Registration
	09.30 - 11.00	Inauguration
	11.30 - 12.30	Plenary session to present papers and propositions for discussion by the groups
	15.00 - 17.30	Group meetings
	18.00 - 19.30	Sarada Ranganathan Lecture 1. By Mr D W Langridge on **"Teaching of Library Classification."**
16 - 18	09.00 - 10.30	Plenary session to present papers and propositions for discussion by the groups
	10.30 - 11.00	Interval
	11.00 - 12.30	Plenary session to finalise the propositions discussed by the groups on the previous day
	15.00 - 17.30	Group meetings
	18.00 - 19.30	Sarada Ranganathan Lectures 2 to 4
19	09.00 - 10.30	Plenary session to finalise the propositions discussed by the groups on the previous day and Closing session
	11.00 - 12.30	Sarada Ranganathan Lecture 5.

DRTC Seminar (7)(1969). XD.

DRAFT RULES OF PROCEDURE FOR PLENARY SESSIONS AND GROUP MEETINGS.

1 GENERAL

11 For each proposition presented, the mover will be allowed not more than 5 minutes at the beginning and not more than 3 minutes at the end for reply.

12 The mover of an amendment will be allowed 3 minutes at the beginning only.

13 Any other speaker on a proposition will be allowed not more than 2 minutes.

14 Any other speaker on an amendment will be allowed not more than 3 minutes.

15 Subject to the mover of a proposition being allowed to speak a second time to reply, no other person will be allowed to speak more than once on a proposition or an amendment.

16 For this purpose, an amended proposition will be taken as a new proposition except that there will be no mover.

17 An amendment to a proposition should consist of one or more of the following:

1 Omission of certain words;
2 Addition of certain words; and
3 Alteration of certain words.

18 An amendment should not reduce a proposition to its negative.

191 In all cases of doubt, the Chairman's ruling will be final.

2 PLENARY SESSION FOR PRESENTING PROPOSITIONS

21 During the first half hour, the respective authors whose papers are covered by the propositions to be presented at the Plenary Session may, on request by members, clarify any point arising out of their respective papers. Each author will be allowed not more than 3 minutes.

22 In the Plenary Session for presenting Propositions for consideration at Group Meetings,

all the facets of the proposition to be considered will be enumerated.

23 This may be done by the Chairman or by any delegate.

24 Any delegate may suggest more than one facet for consideration.

25 There will be no voting in the finalisation of the facets for consideration.

26 The delegates will make note of the facts and bear them in mind in their respective Group Meetings.

3 PLENARY SESSION FOR FINALISING PROPOSITIONS

31 Each proposition will be moved by a delegate and seconded by another.

32 If there is no amendment suggested by any group, there may not generally be necessity to discuss the proposition.

33 However, any delegate may ask for a discussion.

34 If there be two or more amendments to a proposition, the Chairman will decide the sequence in which they should be taken up for discussion.

35 Each amendment as well as the final proposition will be voted upon, if found necessary.

4 DRAFT RULES OF PROCEDURE FOR GROUP MEETINGS

41 General

411 In general, the rules of procedure for the plenary session will be observed in group meetings except that

1 A member may be allowed to speak more than once occasionally, at the discretion of the Leader;

2 There need not necessarily be a formal voting; and

3 It is sufficient if the Leader ascertains the general sense of the group.

412 As far as possible, opportunity should be given to all the members of the group to participate in the discussion.

413 The propositions referrend to the group by the plenary session should be disposed of first.

414 Thereafter, the group may formulate and consider any other proposition relevant to the papers covered by the propositions formulated by the plenary session.

42 Leader

421 The Leader will regulate the conduct of the meeting of the group in accordance with the rules of procedure.

422 As far as practicable, as and when the discussion on a proposition is over, he should see that the proposition in its original or amended form, as the case may be, is passed on to the Convener, in order to facilitate the consolidation of the findings of the different groups and making copies of them in time for distribution before the members disperse in the evening.

423 The Leader will help the Rapporteur to complete all the instalments of the report of the group before 17.15 hours on the day of the meeting and pass it on to the Convener.

43 Rapporteur

431 The rapporteur will keep a record of the names of the members of the group participating in the discussion and wherever possible, indicate whether he spoke for or against any proposition or amendment.

432 A report containing the items mentioned in 431 should be done in a separate sheet and handed over to the convener by 17.30 hours on the day of the meeting.

433 Each instalment of the report on propositions as well as the report on the participating members should contain the number of the group and the date. It should also have the signature of the Leader and the Rapporteur.

INDEX

Note.-

1 The index number is the number of the paper, chapter, or section of the occurrence of the item indexed.

2 The following contractions are used:

def = defined
irt = in relation to
qirt = quoted irt

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      Serbo-Croatian   KD44

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   Multiple authorship   JA221
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32 PROJECT 2

Project 2, to be completed within six months after the formal course in DRTC, consists of the preparation of a Trend Report on an approved specific subject based on the survey of the current documents on the subject appearing in various periodicals, reports, etc.

4 DURATION

The formal course commences on 15 April every year and continues till about 14 June the following year.

5 ADMISSION

A candidate seeking admission to the course should ordinarily possess any one of the following minimum basic academic qualifications :

1 Post-graduate Degree or Diploma in Library Science.

Or

2 MA/M Sc or an equivalent degree or a degree in Engineering, Technology, Agriculture, Animal Husbandry, or Medicine, and practical experience in Documentation.

Admission to the course is strictly based on the merit of a candidate as judged by his academic record, and if necessary, performance in a special admission test held for the purpose or a personal interview by a selection committee.

6 AWARDS FOR PROFESSIONAL ATTAINMENTS

1 Associateship in Documentation on the basis of examination and the report of professional work in DRTC; (The Associateship is declared equivalent to the M Lib Sc degree by the Government of India).

2 Associate Fellowship in Documentation on the basis of report/thesis of research work done in DRTC;

3 Fellowship in Documentation for outstanding contributions and published works in the field of documentation.

7 RESEARCH FELLOWSHIP

Some research fellowships are available to pursue advanced work in DRTC. There is also provision for research fellows to work with Dr S R Ranganathan, National Research Professor in Library Science, and Hon Professor, DRTC.

A practising documentalist will be provided fecilities to reside in DRTC for a specific period to pursue a specific line of research in the field of documentation.

8 PUBLICATIONS

1 *Library science with a slant to documentation,* a quarterly published in collaboration with the Sarada Ranganathan Endowment for Library Science; and

2 Proceedings of the DRTC Seminars.